
From: Poel, Amy J (DOH)
Sent: 1/2/2019 3:32:58 PM
To: Lopez, Adriana (CDC/DDID/NCIRD)
Subject: AFM quotes

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Adriana,

Do you know if Dr. Clark talked with the reporter of this story or if these quotes were pulled from general information that has been given out by CDC about AFM?

https://komonews.com/news/local/hes-one-of-the-luckier-ones-4-year-old-diagnosed-with-rare-illness-plaguing-wash

Amy

Amy J. Poel
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Division of Disease Control and Health Statistics
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Fax 206-364-1060
Gender Pronouns: She/Her
<https://twitter.com/wadepthealth?lang=en>
<https://www.facebook.com/WADeptHealth/>
<https://www.instagram.com/wadepthealth/>
<https://www.youtube.com/channel/UCTSCpezTD0TjiiAOuJY7f5w/doh>
<https://medium.com/@WADeptHealth>

From: D'Angeli, Marisa (DOH)
Sent: 1/11/2019 9:18:00 AM
To: Benoliel, Eileen,Kallen, Alexander (CDC/DDID/NCEZID/DHQP)
Subject: Clinical consult triple carbapenemase WA 0316073

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Hi Eileen,
Please see the email below. Dr. Alex Kallen at CDC will provide clinical consultation to your ID doctor and can offer additional drug testing upon request.

Since this process is new—new AST testing, and clinical consultation for treatment—I'd really appreciate being included in the communication so I can learn. I assume PHSKC would also like to be included too.

I'll let you take it from here.
Best,
Marisa

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206-418-5595 | www.doh.wa.gov
206-418-5500 | 877-539-4344

From: Lonsway, David (CDC/DDID/NCEZID/DHQP) [mailto:dul7@cdc.gov]
Sent: Friday, January 11, 2019 8:51 AM
To: Tran, Michael L (DOH) <Michael.Tran@DOH.WA.GOV>
Cc: Bhatnagar, Amelia (CDC/DDID/NCEZID/DHQP) (CTR) <wmt7@cdc.gov>; Karlsson, Maria (CDC/DDID/NCEZID/DHQP) <fwt4@cdc.gov>; Boyd, Sandra (CDC/DDID/NCEZID/DHQP) <yro6@cdc.gov>; Rasheed, James K. PhD (Kamile) (CDC/DDID/NCEZID/DHQP) <jkr1@cdc.gov>; Kallen, Alexander (CDC/DDID/NCEZID/DHQP) <ffp0@cdc.gov>; Balbuena, Rocio (CDC/DDID/NCEZID/DHQP) (CTR) <nyq0@cdc.gov>
Subject: RE: PCR testing of MaConkey broth

Mike,

We are testing other drugs here at CDC for this isolate. If other drugs are needed for patient care, the physician will need to contact us (Dr. Alex Kallen is our clinical consultant; cc'd here).

David

From: Graham, Julie A (DOH)
Sent: 1/16/2019 8:20:00 AM
To: Armstrong, Marissa
Cc:
Subject: Additional news release- timing?

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Hi Marissa.

On the measles update call this morning, they mentioned that Clark County would be putting out an additional news release with the updated confirmed numbers. Do you know what time this will be going to media?

Thanks, Julie

Julie Graham
Gender Pronouns: her/she
Public Information Officer
Center for Public Affairs
Washington State Department of Health
julie.graham@doh.wa.gov
360-810-1628 | www.doh.wa.gov
<https://www.doh.wa.gov/Newsroom/SocialMedia>

From: EPIXUpdate@cdc.gov
Sent: 12/27/2018 2:12:18 AM
To: Gautom, Romesh (DOH)
Cc:
Subject: Epi-X Today: Thursday, December 27, 2018

Epi-X reports posted in your areas of interest in the past 24 hours. To view a specific report, click on its URL.

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

~*~ Global Immunization News Report, December 21-26, 2018 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Friday through Wednesday, December 21-26, 2018.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=68012

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

FDA Enforcement Report -- United States, December 26, 2018
This report contains Class I, II, and III recalls of food and food products, drugs, biologics, and devices. The link to the full report is accessible through this posting.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=68010

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~

~*~ Media Tracking Report, December 26, 2018 ~*~
Media stories include rabies in Arizona; measles in multiple states and countries; pertussis in Indiana; AFM in multiple states; influenza in multiple states and Italy; hantavirus in Argentina; malaria in Nigeria and Trinidad & Tobago; yellow fever in South Sudan; cholera in Zimbabwe; and other media coverage.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=68011

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Receive this message in Text format: https://epix2.cdc.gov/v2/Preferences.aspx#Email

_____
From: Carlson, Alyssa
Sent: 1/16/2019 5:08:24 PM
To: Millet, Meghan,McCarthy, Shannon,DeBolt, Chas (DOH)
Subject: FW: Encrypted email instructions


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attachments\DDACEB1C308E4586_image004.jpg


attachments\F9FE7A3B626B4273_image012.jpg


attachments\F8BFE5D5F31E48AF_image010.jpg

FYI – useful in handing off non-Clark County contacts to their respective jurisdictions.

<https://www.clark.wa.gov/>

Alyssa Carlson, MPH
Epidemiologist
COMMUNICABLE DISEASE

564.397.8020

<https://www.facebook.com/pages/Clark-County-WA/1601944973399185>
<https://twitter.com/ClarkCoWA> <https://www.youtube.com/user/ClarkCoWa/>

From: Johnson, Jazette
Sent: Wednesday, January 16, 2019 5:06 PM
To: Carlson, Alyssa; PH, Situation Unit Leader
Subject: Encrypted email instructions

https://clarknet.clark.wa.gov/information-technology/faq/encrypt-email-message

<https://www.clark.wa.gov/>

Jazette Johnson
Records Program Coordinator
CLARK COUNTY PUBLIC HEALTH

564-397-7367

<https://www.facebook.com/pages/Clark-County-WA/1601944973399185>
<https://twitter.com/ClarkCoWA> <https://www.youtube.com/user/ClarkCoWa/>

disclosure under state law.

From: Hun, Sopheay (DOH)
Sent: 1/16/2019 11:59:02 AM
To: Ruiz, Ryan S (DOH),Tran, Michael L (DOH),Veliz, Kirstin L (DOH),Castro, Lina M (DOH),Hiatt, Brian C (DOH),Glover, William A (DOH),Precit, Mimi R (DOH),Schneider, Emily C (DOH),D'Angeli, Marisa (DOH),Podczervinski, Sara T (DOH),Kauber, Kelly J (DOH),Olsen, Bonnie L (DOH),ARLN (CDC)
Cc:
Subject: San Diego CA HAN 01-16-2019.pdf

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attachments\B0B4BC4589F74182_San Diego CA HAN 01-16-2019.pdf

Hi all

We've had an increased inquiry about CRE colonization testing and request for swabs from our California county partners. Dr. Eric Peterson at San Diego Public Health shared the HAN released today regarding VIM testing for CPRA associated with surgery in Tijuana. We most likely will get more questions and request for CRE swabs.

Regards,

Sopheay

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Fax: (206) 364 – 0072 | West Region ARLN@doh.wa.gov

ARLN Test Menu

West ARLN SharePoint

<https://urldefense.proofpoint.com/v2/url?u=https-3A__www.doh.wa.gov_Newsroom_SocialMedia&d=DwMFAg&c=Lr0a7ed3egkbwePCNW4ROg&r=VJPqY1m95
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KQUdvmDWfXP5AKvPPk&s=xb6HMOAI6VXQBTN1Ap22pUsMe4-hVi0IT_SMvmtD_5o&e=>

To: CAHAN San Diego Participants
Date: January 16, 2019
From: Epidemiology Program, Public Health Services

Carbapenem-resistant *Pseudomonas aeruginosa* Infections after Surgery in Tijuana

This health alert informs providers about a recent level 2 travel alert issued by the Centers for Disease Control and Prevention (CDC) regarding carbapenem-resistant *Pseudomonas aeruginosa* (CRPA) infections linked to surgeries in Tijuana, Mexico. Recommendations for local healthcare professionals and resource links are provided.

Key Points:

- U.S. residents returning from Tijuana, Mexico after having invasive medical procedures have recently been diagnosed with CRPA infections. About half of those infected had their surgery performed at Grand View Hospital in Tijuana.
- Travelers to Tijuana should not have surgery at Grand View Hospital until public health authorities can confirm that CRPA is no longer there.
- Individuals planning to go abroad for medical procedures should consult with their local providers prior to departure and follow CDC medical tourism travel advice.
- Patients with infections after surgery in Mexico (or other overseas locations) should be tested for CRPA and should be handled with appropriate infection control.
- Providers should report CRPA infections after surgical procedures at foreign healthcare facilities to the County Epidemiology Program and arrange to test CRPA specimens for resistance mechanism via the County Public Health Laboratory.

Situation

CDC has received reports of serious CRPA infections in U.S. residents who had invasive medical procedures (primarily weight-loss surgery) in Tijuana. The implicated pathogen in the current cluster has a resistance mechanism due to metallo-β-lactamase encoded by a mobile genetic element known as the Verona integrin (VIM). About half of those infected with these bacteria had surgery at Grand View Hospital in Tijuana. The others became infected after surgery at other hospitals and clinics in Tijuana. To date, no San Diego or California residents have been reported in this VIM-CRPA cluster.

Infections caused by CRPA are uncommon in the United States and difficult to treat. CDC recommends that travelers to Mexico not have surgery (including weight-loss surgery) at Grand View Hospital in Tijuana, until Mexican health officials can confirm that CRPA is no longer there. The surgical wing of hospital was closed on December 19, 2018.

Background

Traveling abroad for medical care is increasingly common. Medical and surgical procedures done anywhere (including the United States) carry some risk and can result in complications, including infection. Prior to travel, CDC recommends that individuals consult a local travel medicine specialist at least a month before departure. Travelers should consult their own physician and research the foreign provider who will perform any planned procedure, as well as the clinic or hospital where the care will be provided.

Recommendations for Providers

- Advise patients who are seeking medical care outside the United States to research the foreign provider and to avoid having any procedures at Grand View Hospital until the facility has been verified to be clear of CRPA by Mexican health officials.
- Be vigilant for the possibility of resistant infections occurring in patients who have traveled abroad for medical procedures, especially those with a history of invasive procedures in Tijuana.
- Perform rectal screening for carbapenemase-producing organisms when admitting patients who have a history of overnight stays in foreign healthcare facilities.
  - This recommendation applies to patients hospitalized outside the U.S. at any time during the six months before their local hospital admission.
  - Consider placing such patients in isolation and contact precautions while awaiting screening results.
  - Rectal screening is available through the County Public Health Laboratory. Call (619) 692-8500, option 1 or email for information on proper specimen collection, storage and transport.
- Obtain cultures and perform antimicrobial susceptibility testing to guide treatment of infections in patients who have a history of having undergone invasive procedures.
- Place patients from whom VIM-CRPA is isolated (regardless of specimen source) in isolation on contact precautions, and ask them about receipt of healthcare outside the U.S., including medical tourism, in the six months prior to positive culture.
- Consult with an infectious disease specialist when caring for patients with CRPA. CRPA infections are difficult to treat, requiring protracted and complex antibacterial drug combinations and courses.
- Report cases of any surgical site infections in patients who have recently undergone surgery in foreign medical facilities. Call the County Epidemiology Program during normal business hours at 619-692-8499 (Mon-Fri 8 AM to 5 PM) or fax a Confidential Morbidity Report to 858-715-6458.
- Test any carbapenem-resistant *Pseudomonas aeruginosa* or Enterobacteriaceae for VIM and other plasmid-mediated carbapenemases.
  - Mechanism testing for VIM and other plasmid-mediated carbapenemases may be arranged via the County Public Health Laboratory after approval by the County Epidemiology Program.
  - Call (619) 692-8500, option 1 or email for information on proper specimen collection, storage and transport.

Resources

- CDC Travel Alert on Drug-resistant Infections in Mexico
- CDC Clinician Information on Medical Tourism

- CDC Traveler Information on Medical Tourism
- CDC website: Carbapenem-resistant Enterobacteriaceae in Healthcare Settings
- CDC toolkit: Facility Guidance for Control of Carbapenem-resistant Enterobacteriaceae (CRE) – November 2015 Update
- California Department of Public Health website: Hospital Acquired Infection Program

Thank you for your participation.

CAHAN San Diego
County of San Diego Health & Human Services Agency
Epidemiology and Immunization Services Branch
Phone: (619) 692-8499
Fax: (858) 715-6458
Urgent Phone for pm/weekends/holidays: (858) 565-5255
E-mail: cahan@sdcounty.ca.gov
Secure Website: http://cahan.ca.gov
Public Website: http://www.cahansandiego.com

From: Lindsey, Nicole (CDC/DDID/NCEZID/DVBD)
Sent: 1/8/2019 2:33:47 PM
To:
Cc:
Subject: West Nile Virus and Other Arboviral Activity and Chikungunya virus disease -- United States, 2018

attachments\B465CBDFDF9F401B_2019-01-08 Arboviral activity update.pdf

attachments\15516F369A874A93_2019-01-08 Chikungunya update.pdf

Colleagues,

Attached please find the last 2018 provisional ArboNET reports for West Nile virus and other domestic arboviruses and chikungunya virus. We will distribute final 2018 reports in the spring once the 2018 data are finalized.

ArboNET staff (Kimberly Landry and Nicole Lindsey) will be reaching out to each jurisdiction over the coming weeks to start 2018 data closeout processes. Our tentative closeout date is COB April 15, 2019. Please let me know if you think you will have trouble meeting this deadline.

If you have questions about these reports, the ArboNET surveillance system, or data closeout, please contact Nicole Lindsey (nplindsey@cdc.gov; 970-266-3595).

Best,
Nicole

Nicole Lindsey, MS
Arboviral Diseases Branch
Centers for Disease Control and Prevention
Fort Collins, Colorado
nplindsey@cdc.gov

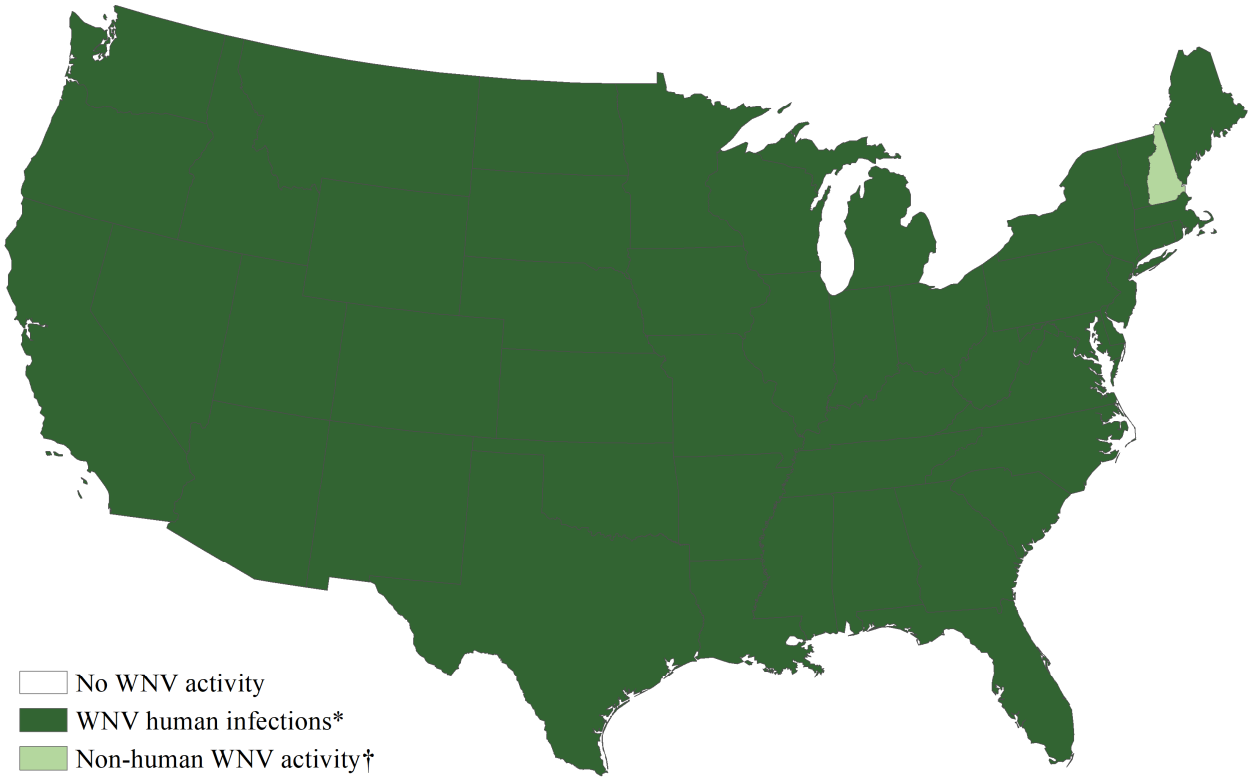
West Nile virus and other domestic arboviral activity -- United States, 2018
Provisional data reported to ArboNET
Tuesday, January 8, 2019

This update from the CDC Arboviral Disease Branch includes provisional data reported to ArboNET for **January 1, 2018 – December 31, 2018** for West Nile virus and selected other nationally notifiable domestic arboviruses. Additional resources for ArboNET and arboviral diseases are provided on page 10.

West Nile virus (WNV) activity in 2018

As of January 8th, 1,339 counties from 49 states and the District of Columbia have reported WNV activity to ArboNET for 2018, including 48 states and the District of Columbia with reported WNV human infections (i.e., disease cases or viremic blood donors) and one additional state with reported WNV activity in non-human species only (i.e., veterinary cases, mosquito pools, dead birds, or sentinel animals) **[Figure 1]**.

Figure 1. West Nile virus (WNV) activity reported to ArboNET, by state — United States, 2018 (as of January 8, 2019)



*WNV human disease cases or presumptive viremic blood donors. Presumptive viremic blood donors have a positive screening test which has not necessarily been confirmed.

†WNV veterinary disease cases, or infections in mosquitoes, birds, or sentinel animals

Reported WNV disease cases

To date, 2,544 human WNV disease cases have been reported from 755 counties in 48 states and the District of Columbia **[Table 1]**. Dates of illness onset for cases ranged from January–December **[Figure 2]**.

Of the 2,544 reported cases, 1,594 (63%) were classified as neuroinvasive disease (e.g., meningitis or encephalitis) and 950 (37%) were classified as non-neuroinvasive disease **[Figure 3]**.

Presumptive viremic donors (PVDs)

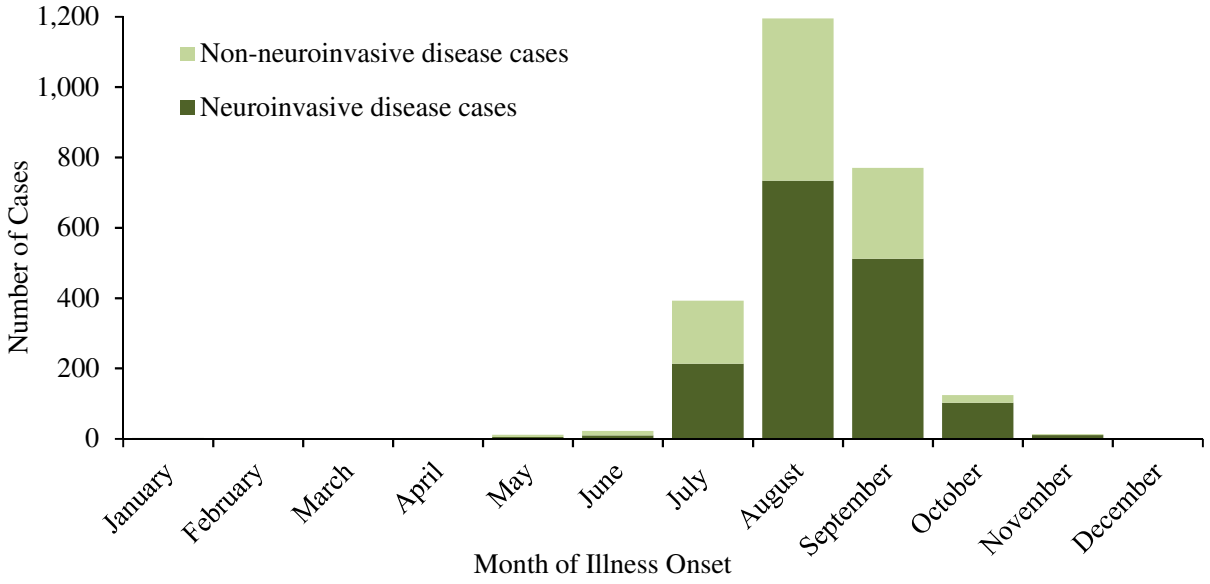
Overall, 357 WNV PVDs have been reported from thirty-five states **[Table 1]**.

Table 1. West Nile virus infections in humans reported to ArboNET, 2018

State	Human disease cases reported to CDC*				Presumptive viremic blood donors
	Neuroinvasive	Non-neuroinvasive	Total	Deaths	
Alabama	15	13	28	0	4
Alaska	1	0	1	0	0
Arizona	25	1	26	5	0
Arkansas	5	2	7	0	0
California	144	60	204	8	26
Colorado	52	44	96	3	4
Connecticut	18	5	23	1	1
Delaware	8	2	10	2	1
District of Columbia	7	6	13	0	0
Florida	25	4	29	1	6
Georgia	30	6	36	2	2
Idaho	10	6	16	1	0
Illinois	122	50	172	16	19
Indiana	25	9	34	4	16
Iowa	58	45	103	5	8
Kansas	26	13	39	5	2
Kentucky	9	3	12	0	0
Louisiana	42	22	64	3	11
Maine	1	1	2	0	0
Maryland	34	11	45	0	5
Massachusetts	42	6	48	2	2
Michigan	80	22	102	9	12
Minnesota	34	28	62	2	24
Mississippi	31	18	49	0	2
Missouri	17	6	23	3	6
Montana	25	22	47	1	5
Nebraska	121	124	245	11	46
Nevada	3	6	9	0	0
New Jersey	44	17	61	3	6
New Mexico	4	1	5	1	2
New York	71	19	90	6	7
North Carolina	10	0	10	2	0
North Dakota	59	142	201	2	33
Ohio	45	20	65	6	18
Oklahoma	12	6	18	1	6
Oregon	2	0	2	0	0
Pennsylvania	89	30	119	8	24
Rhode Island	0	1	1	0	0
South Carolina	12	3	15	1	4
South Dakota	47	122	169	4	19
Tennessee	11	1	12	4	1
Texas	98	35	133	5	24
Utah	7	4	11	1	0
Vermont	1	0	1	0	0
Virginia	37	10	47	7	2
Washington	2	1	3	0	2
West Virginia	1	0	1	0	0
Wisconsin	29	2	31	1	7
Wyoming	3	1	4	1	0
Totals	**1,594**	**950**	**2,544**	**137**	**357**

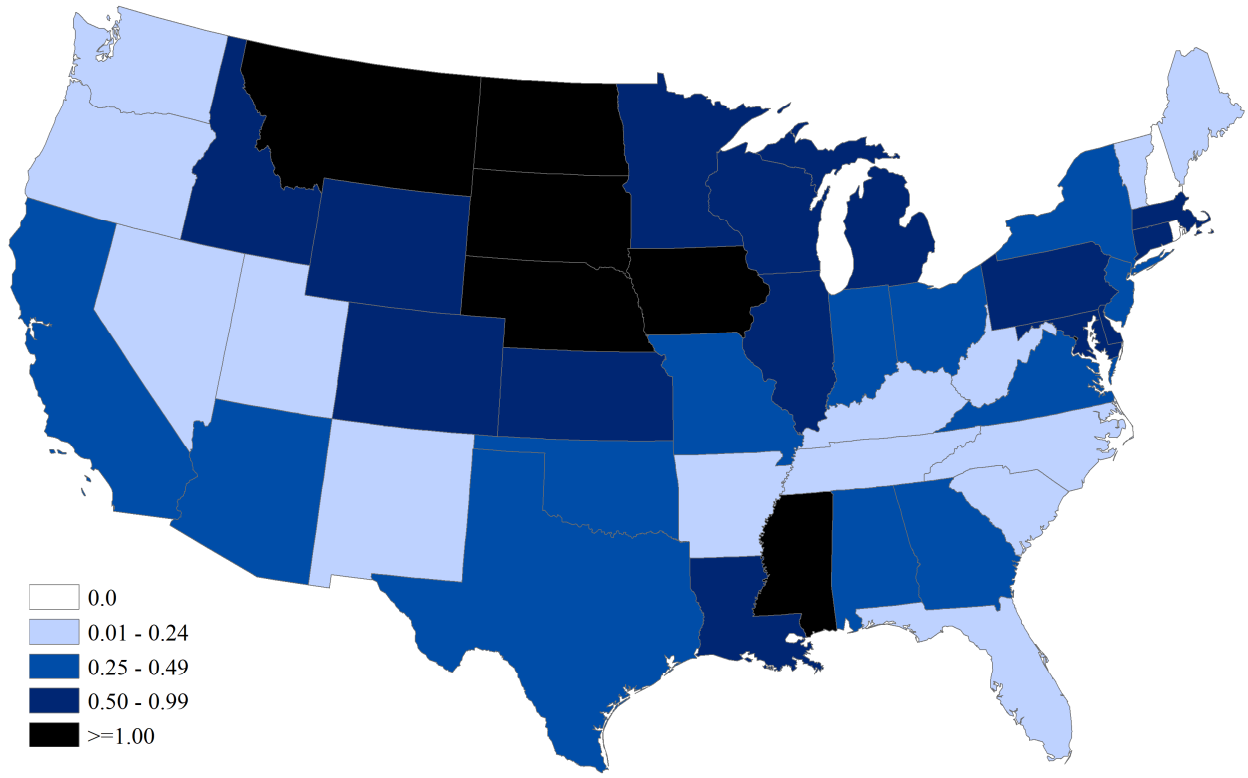
*Includes confirmed and probable cases

Figure 2. West Nile virus disease cases reported to ArboNET, by month of onset* — United States, 2018 (as of January 8, 2019)



*Cases missing onset date (n=2)

Figure 3. West Nile virus (WNV) neuroinvasive disease incidence* reported to ArboNET, by state — United States, 2018 (as of January 8, 2019)

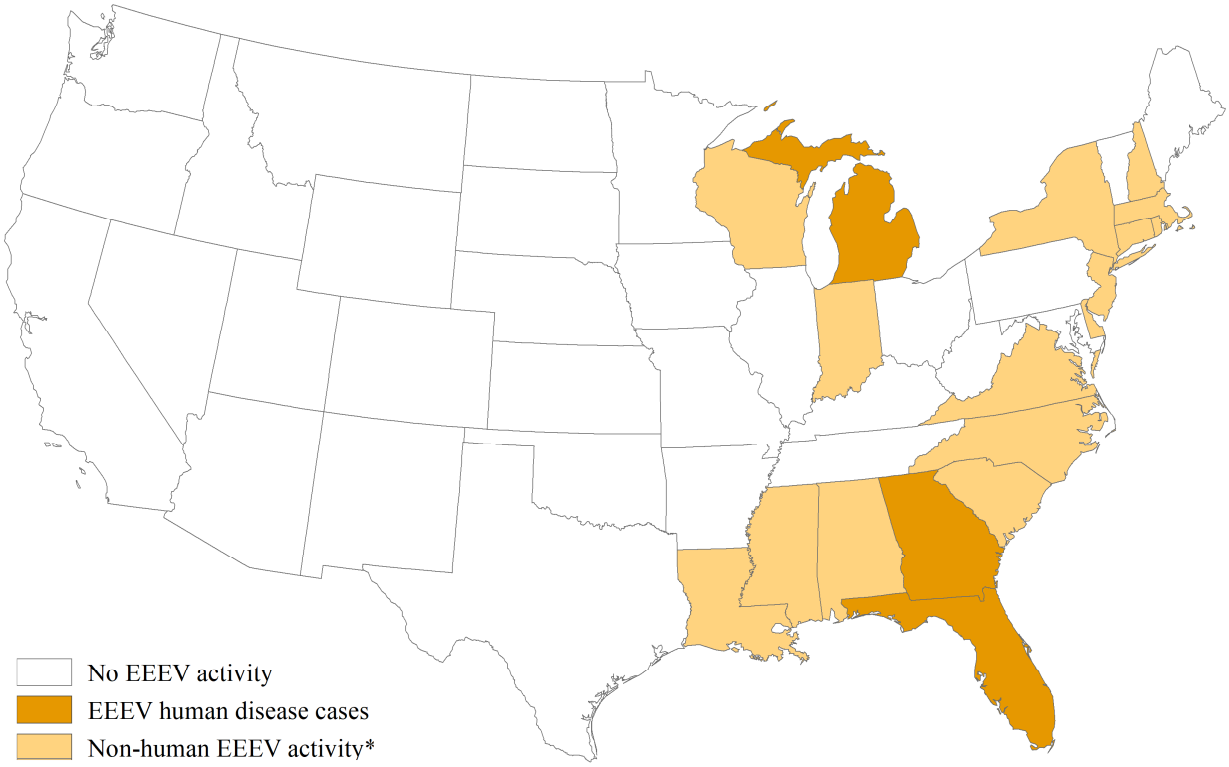


*Incidence per 100,000 population

Eastern equine encephalitis virus (EEEV) activity in 2018

As of January 8th, five counties in three states have reported human cases of EEEV disease to ArboNET for 2018 **[Figure 4 and Table 2]**. One hundred and seven counties in eighteen states reported EEEV activity in non-human species.

Figure 4. Eastern equine encephalitis virus (EEEV) activity reported to ArboNET, by state — United States, 2018 (as of January 8, 2019)



*EEEV veterinary disease cases, or infections in mosquitoes, birds, or sentinel animals

Table 2. Eastern equine encephalitis virus human disease cases reported to ArboNET, United States, 2018

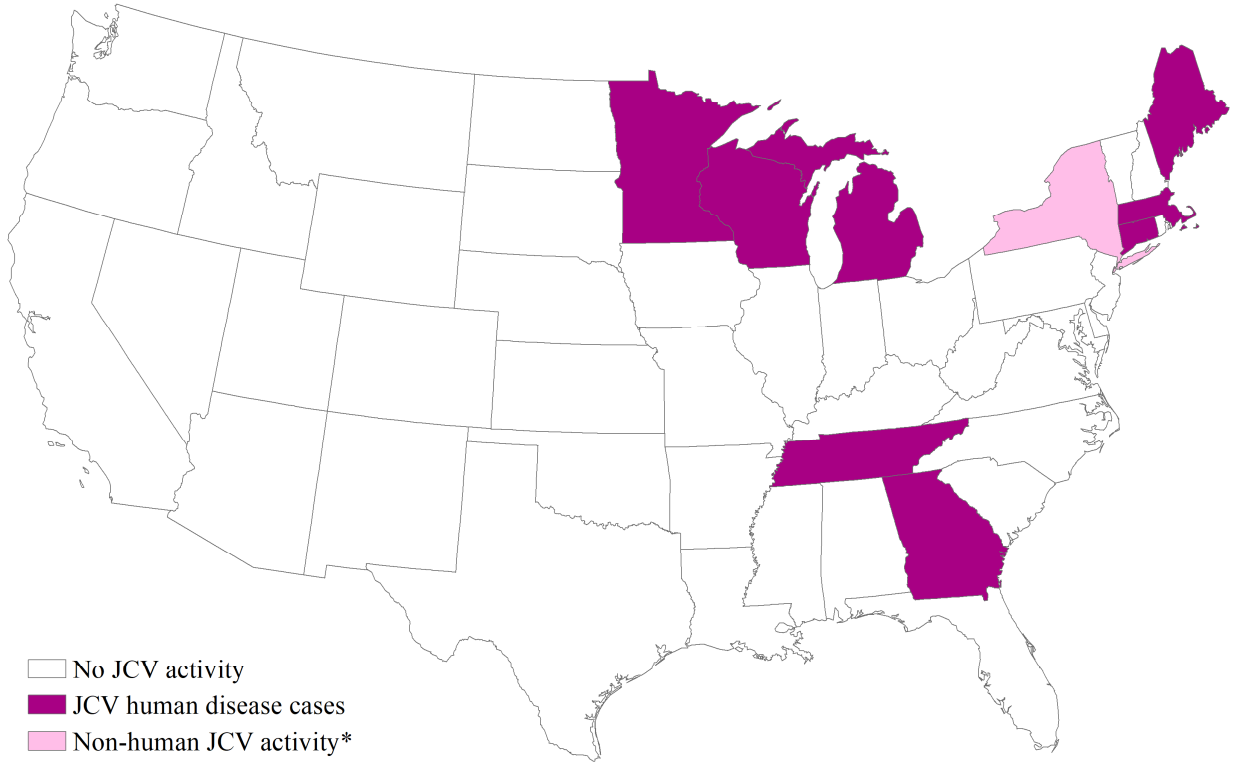
State	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases*	Deaths
Florida	3	0	3	0
Georgia	1	0	1	1
Michigan	1	0	1	0
Totals	**5**	**0**	**5**	**1**

*Includes confirmed and probable cases.

Jamestown Canyon virus (JCV) activity in 2018

As of January 8th, thirty counties in eight states have reported human cases of JCV disease to ArboNET for 2018 **[Figure 5 and Table 3]**. Fourteen counties in Connecticut and New York reported JCV activity in non-human species.

Figure 5. Jamestown Canyon virus (JCV) activity reported to ArboNET, by state — United States, 2018 (as of January 8, 2019)



*JCV veterinary disease cases, or infections in mosquitoes, birds, or sentinel animals

Table 3. Jamestown canyon virus human disease cases reported to ArboNET, United States, 2018

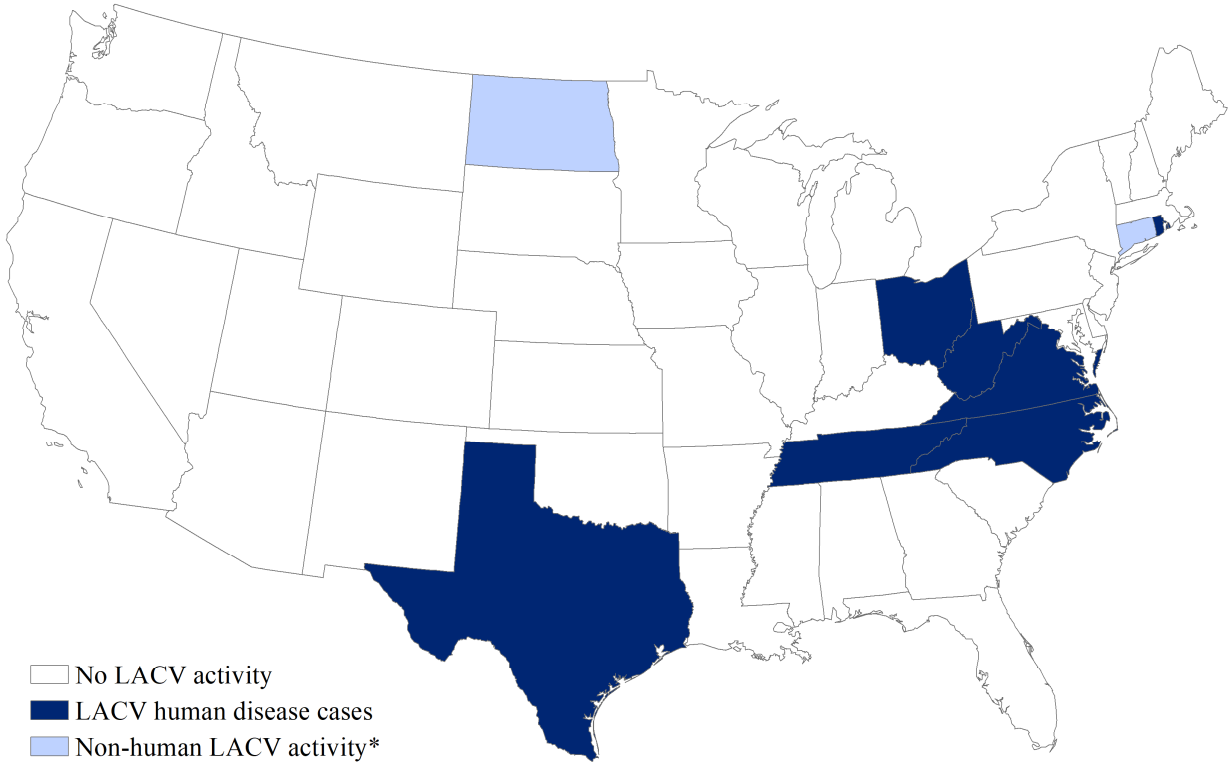
State	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases*	Deaths
Connecticut	1	0	1	0
Georgia	0	1	1	0
Maine	1	0	1	1
Massachusetts	1	0	1	0
Michigan	1	1	2	0
Minnesota	4	3	7	0
Tennessee	1	0	1	0
Wisconsin	14	6	20	0
Totals	**23**	**11**	**34**	**1**

*Includes confirmed and probable cases.

La Crosse virus (LACV) activity in 2018

As of January 8th, forty-six counties in seven states have reported human cases of LACV disease to ArboNET for 2018 **[Figure 6 and Table 4]**. Two counties in Connecticut and North Dakota have reported LACV activity in non-human species only.

Figure 6. La Crosse virus (LACV) activity reported to ArboNET, by state — United States, 2018 (as of January 8, 2019)



*LACV veterinary disease cases, or infections in mosquitoes, birds, or sentinel animals

Table 4. La Crosse virus human disease cases reported to ArboNET, United States, 2018

State	Neuroinvasive disease cases	Nonneuroinvasive disease cases	Total cases*	Deaths
North Carolina	23	0	23	0
Ohio	38	1	39	0
Rhode Island	1	0	1	0
Tennessee	12	1	13	0
Texas	1	0	1	0
Virginia	2	0	2	0
West Virginia	4	1	5	0
Totals	**81**	**3**	**84**	**0**

*Includes confirmed and probable cases.

Powassan virus (POWV) activity in 2018

As of January 8th, twelve counties in five states have reported human cases of POWV disease to ArboNET for 2018 **[Figure 7 and Table 5].**

Figure 7. Powassan virus (POWV) activity reported to ArboNET, by state — United States, 2018 (as of January 8, 2019)

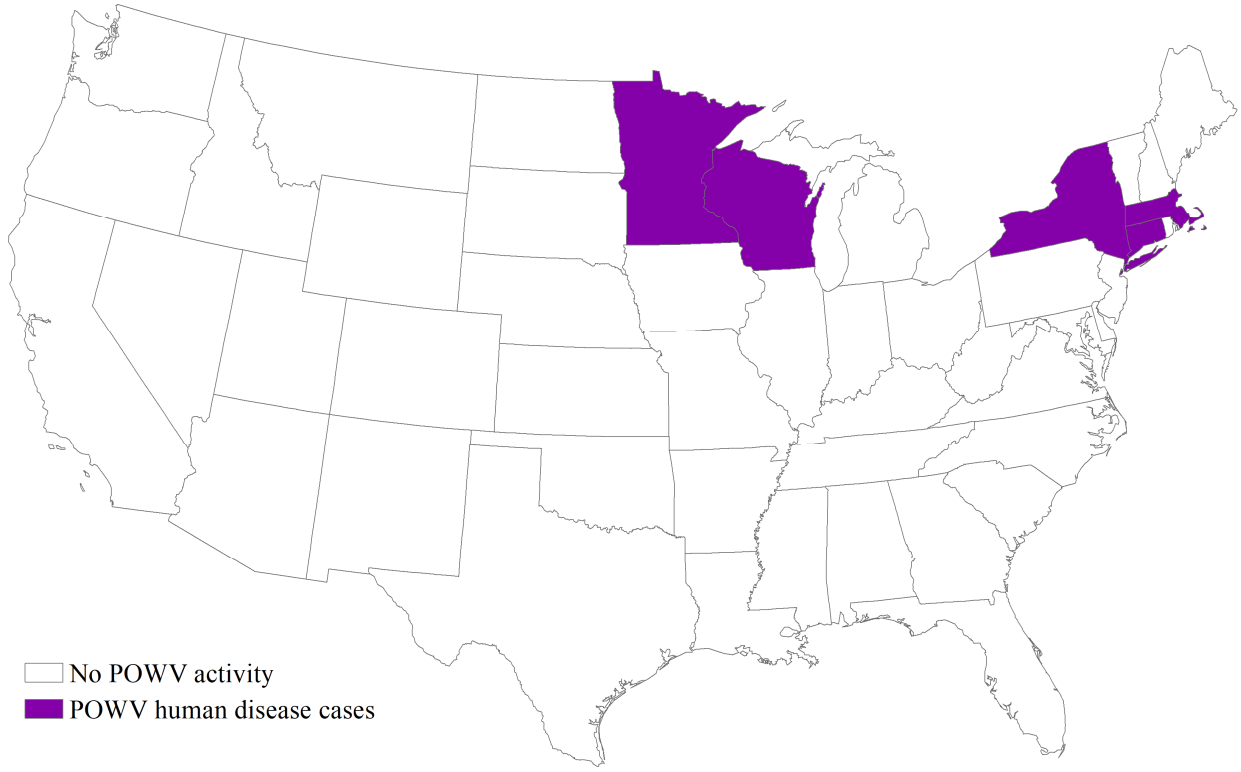


Table 5. Powassan virus human disease cases reported to ArboNET, United States, 2018

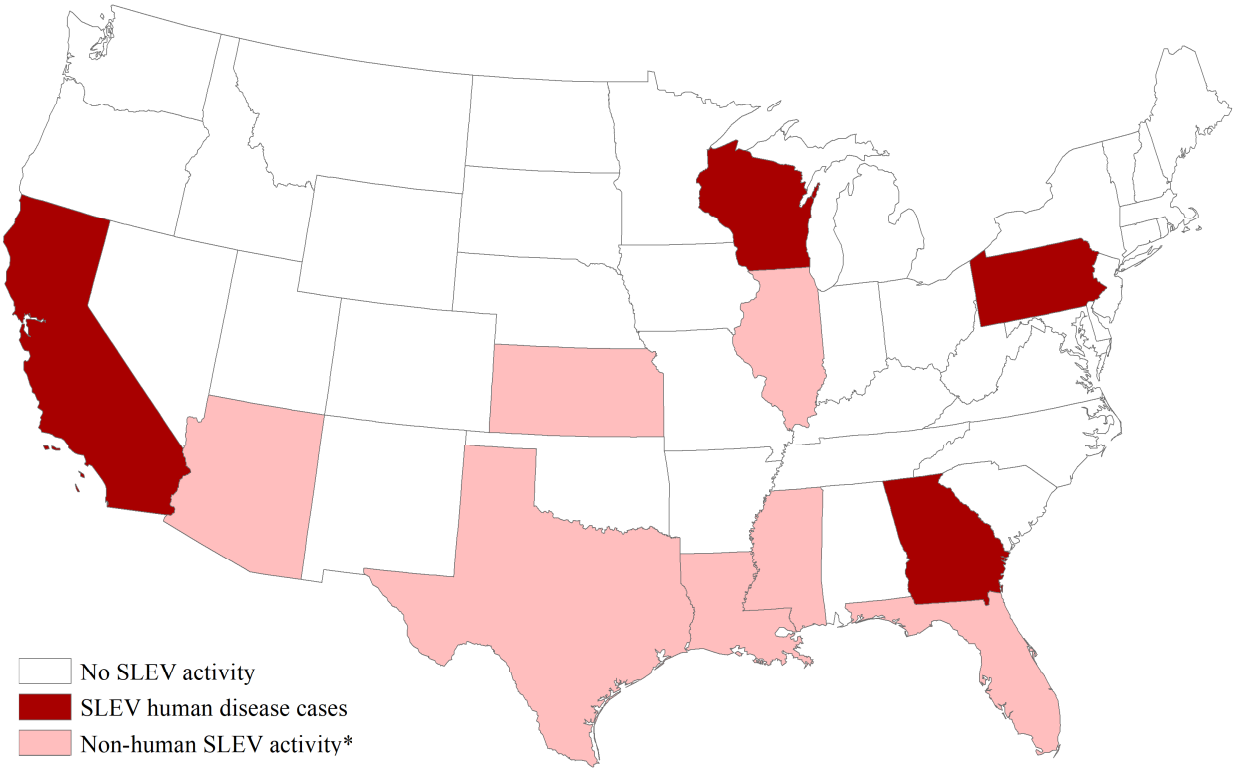
State	Neuroinvasive disease cases	Nonneuroinvasive disease cases	Total cases*	Deaths
Connecticut	2	0	2	0
Massachusetts	5	0	5	1
Minnesota	3	0	3	0
New York	4	0	4	0
Wisconsin	1	0	1	0
Totals	**15**	**0**	**15**	**1**

*Includes confirmed and probable cases.

St. Louis encephalitis virus (SLEV) activity in 2018

As of January 8th, seven counties in four states have reported human cases of SLEV disease to ArboNET for 2018 **[Figure 8 and Table 6]**. Twenty-three counties in eight states have reported SLEV activity in non-human species.

Figure 8. St. Louis encephalitis virus (SLEV) activity reported to ArboNET, by state — United States, 2018 (as of January 8, 2019)



*SLEV veterinary disease cases, or infections in mosquitoes, birds, or sentinel animals

Table 6. St. Louis encephalitis virus human disease cases reported to ArboNET, United States, 2018

State	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases*	Deaths
California	3	1	4	0
Georgia	0	1	1	0
Pennsylvania	0	1	1	0
Wisconsin	1	0	1	1
Totals	**4**	**3**	**7**	**1**

*Includes confirmed and probable cases.

About ArboNET

ArboNET is a national arboviral surveillance system managed by CDC and state health departments. In addition to human disease, ArboNET maintains data on arboviral infections among presumptive viremic blood donors (PVDs), veterinary disease cases, mosquitoes, dead birds, and sentinel animals. As with other national surveillance data, ArboNET data has several limitations that should be considered in analysis, interpretation, and reporting **[Box]**.

Box: Limitations of ArboNET data

The following should be considered in the analysis, interpretation, and reporting of ArboNET data:

1. ArboNET is a passive surveillance system. It is dependent on clinicians considering the diagnosis of an arboviral disease and obtaining the appropriate diagnostic test, and reporting of laboratory-confirmed cases to public health authorities. Diagnosis and reporting are incomplete, and the incidence of arboviral diseases is underestimated.
2. Reported neuroinvasive disease cases are considered the most accurate indicator of arboviral activity in humans because of the substantial associated morbidity. In contrast, reported cases of nonneuroinvasive arboviral disease are more likely to be affected by disease awareness and healthcare-seeking behavior in different communities and by the availability and specificity of laboratory tests performed. Surveillance data for nonneuroinvasive disease should be interpreted with caution and generally should not be used to make comparisons between geographic areas or over time.

Additional resources

For additional arboviral disease information and data, please visit the following websites:

- CDC's Division of Vector-Borne Diseases:
  http://www.cdc.gov/ncezid/dvbd/
- National Notifiable Diseases Surveillance System:
  http://wwwn.cdc.gov/nndss/conditions/arboviral-diseases-neuroinvasive-and-non-neuroinvasive/case-definition/2015/
- CDC Disease Maps
  https://wwwn.cdc.gov/arbonet/Maps/ADB_Diseases_Map/index.html
- AABB (American Association of Blood Banks):
  www.aabb.org/programs/biovigilance/Pages/wnv.aspx

Chikungunya virus disease -- United States, 2018
Provisional data reported to ArboNET
Tuesday, January 8, 2019

Chikungunya virus disease is a nationally notifiable condition. Cases are reported to CDC by state and local health departments using standard case definitions. This update from the CDC Arboviral Disease Branch includes provisional data reported to ArboNET for **January 1 – December 31, 2018.**

As of January 8, a total of 90 chikungunya virus disease cases with illness onset in 2018 have been reported to ArboNET from 23 U.S. states (Figure & Table 1). All reported cases occurred in travelers returning from affected areas (Table 2). No locally transmitted cases have been reported from U.S. states.

To date, two locally transmitted chikungunya virus disease case with illness onset in 2018 have been reported to ArboNET from Puerto Rico (Table 1).

Figure. States reporting chikungunya virus disease cases – United States, 2018 (as of January 8, 2019)

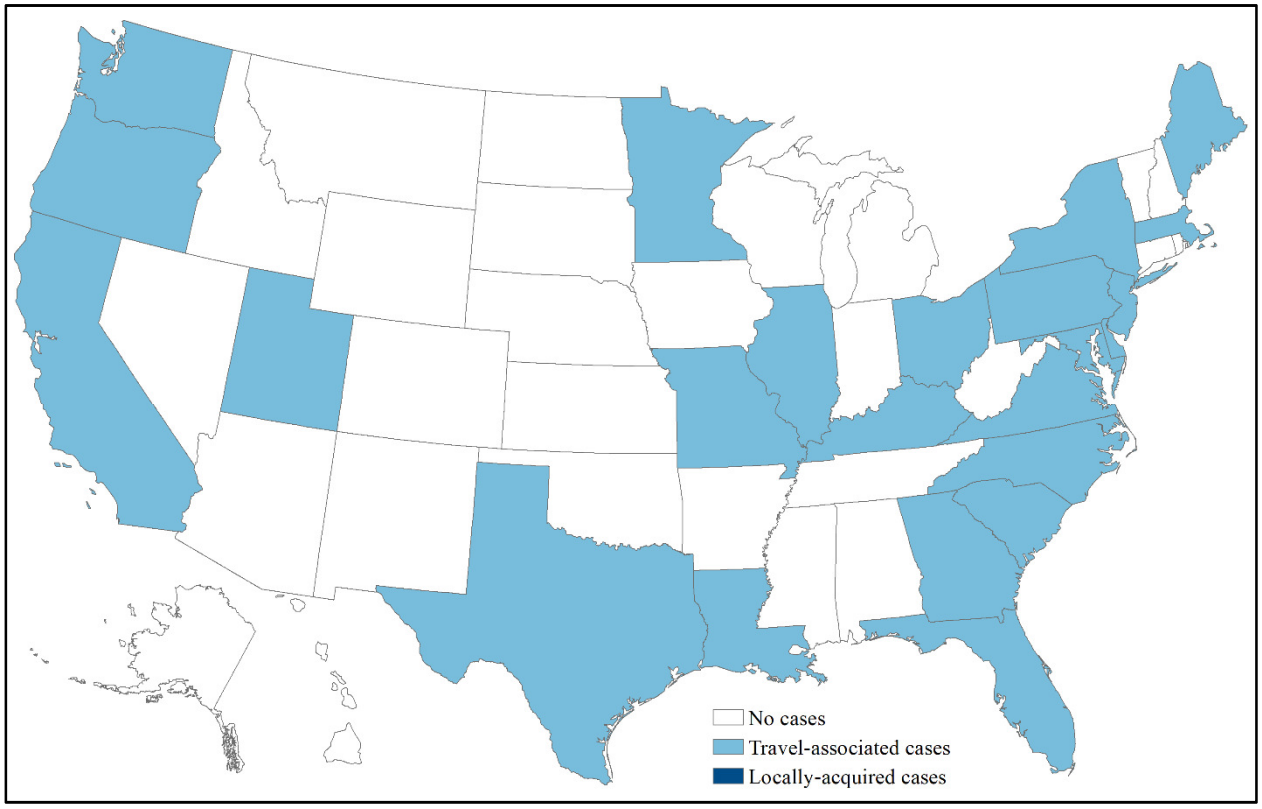


Table 1. Chikungunya virus disease cases* reported to ArboNET by state or territory — United States, 2018 (as of January 8, 2019)

States	Travel-associated cases No. (%) (N=90)	Locally transmitted cases No. (%) (N=0)
California	21 (23)	0 (0)
Delaware	1 (1)	0 (0)
Florida	4 (4)	0 (0)
Georgia	1 (1)	0 (0)
Illinois	9 (10)	0 (0)
Kentucky	1 (1)	0 (0)
Louisiana	1 (1)	0 (0)
Maine	1 (1)	0 (0)
Maryland	2 (2)	0 (0)
Massachusetts	2 (2)	0 (0)
Minnesota	1 (1)	0 (0)
Missouri	2 (2)	0 (0)
New Jersey	14 (16)	0 (0)
New York	10 (11)	0 (0)
North Carolina	2 (2)	0 (0)
Ohio	3 (3)	0 (0)
Oregon	1 (1)	0 (0)
Pennsylvania	1 (1)	0 (0)
South Carolina	1 (1)	0 (0)
Texas	7 (8)	0 (0)
Utah	1 (1)	0 (0)
Virginia	3 (3)	0 (0)
Washington	1 (1)	0 (0)
Territories	**(N=0)**	**(N=2)**
Puerto Rico	0 (0)	2 (100)

*Includes confirmed and probable cases

Table 2. Chikungunya virus disease cases* reported to ArboNET by travel region– United States, 2018 (as of January 8, 2019)

Travel Region	Travel-associated cases No. (%) (N=90)
Asia	48 (53)
Caribbean	11 (12)
North America	10 (11)
Africa	6 (7)
South America	6 (7)
Central America	3 (3)
Oceania/Pacific	2 (2)
Europe	1 (1)
Unknown	3 (3)

*Includes confirmed and probable cases

_____
From: EPIXUpdate@cdc.gov
Sent: 12/28/2018 2:03:37 AM
To: D'Angeli, Marisa (DOH)
Cc:
Subject: Epi-X Today: Friday, December 28, 2018

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~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
~*~ Global Immunization News Report, December 26, 2018 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Wednesday, December 26, 2018.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=68037

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~
~*~ Media Tracking Report, December 27, 2018 ~*~
Media stories include hepatitis A in Alabama; influenza and pertussis in California; a respiratory virus in Louisiana; Legionella bacteria in New York; acute flaccid myelitis in multiple states; chickenpox and measles in Australia; H9N2 in China; Ebola in DRC; MERS-CoV in Saudi Arabia; and other media coverage.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=68036

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+1-770-488-7100 (If you cannot use the toll free number above, please call the CDC Emergency Operations Center and ask to speak to the Epi-X editor on call.)

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_____
From: EPIXUpdate@cdc.gov
Sent: 12/29/2018 2:16:15 AM
To: Gautom, Romesh (DOH)
Cc:
Subject: Epi-X Today: Saturday, December 29, 2018

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~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
~*~ Global Immunization News Report, December 27, 2018 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Thursday, December 27, 2018.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69049

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~
~*~ Media Tracking Report, December 28, 2018 ~*~
Media stories include pertussis and congenital syphilis in California; influenza in multiple states; acute flaccid myelitis in Florida and Massachusetts; Legionnaires' in Michigan; measles in Nevada and New York; chickenpox in Australia and New Zealand; typhoid fever in Pakistan; and other media coverage.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69048

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From: EPIXUpdate@cdc.gov
Sent: 12/20/2018 2:06:49 AM
To: D'Angeli, Marisa (DOH)
Cc:
Subject: Epi-X Today: Thursday, December 20, 2018

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~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
DGMQ TB Notification: Contact List for Flight KAL 0011 to LAX 11/10/2018 (DGMQ ID 194790) - WA
The attached file contains names of persons assigned to your jurisdiction, based on available information, who may have been exposed to tuberculosis on a flight.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=67962

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
~*~ Global Immunization News Report, December 18, 2018 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Tuesday, December 18, 2018.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=67961

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
FDA Enforcement Report -- United States, December 19, 2018
This report contains Class I, II, and III recalls of food and food products, drugs, biologics, and devices. The link to the full report is accessible through this posting.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=67959

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~
~*~ Media Tracking Report, December 19, 2018 ~*~
Media stories include hepatitis A in Arizona, Louisiana, and New Mexico; influenza in multiple states and countries; acute flaccid myelitis in Michigan; prion disease in Tennessee; legionellosis in Wisconsin; Lassa fever in Benin; Ebola in DRC; measles in Brazil and Israel; and other media coverage.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=67960

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Sent: 1/3/2019 2:06:27 AM
To: D'Angeli, Marisa (DOH)
Cc:
Subject: Epi-X Today: Thursday, January 3, 2019

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~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
~*~ Global Immunization News Report, January 1, 2019 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Tuesday, January 1, 2019.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69075

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
FDA Enforcement Report -- United States, January 2, 2019
This report contains Class I, II, and III recalls of food and food products, drugs, biologics, and devices. The link to the full report is accessible through this posting.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69071

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~
~*~ Media Tracking Report, January 2, 2019 ~*~
Media stories include rabies in Arizona; influenza in Colorado and Maine; West Nile and acute flaccid myelitis in Florida; measles in multiple states and countries; hantavirus in Argentina; rubella in Spain; norovirus in the United Kingdom; and other media coverage.

https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69072

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From: Czapla, Monica
Sent: 1/15/2019 10:02:45 PM
To: Lippman, Soyeon I (DOH)
Subject: Re: CD Epi Measles contact

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attachments\6113E51022B14BD1_image006.png
attachments\C0CFBF2DD6F04CC7_image010.png
attachments\72E85BE26948458F_image011.png
attachments\42502CC45C9A4A59_image015.png
attachments\D8705912836D41F3_image014.png
attachments\607EA809F3A8466D_image013.png
attachments\0D44D15069794918_image004.png
attachments\EF4A1CDB6A234E6D_image002.png
attachments\59D357367F174680_image008.png

Thank you all at DOH for your support, VERY much appreciated.

My CD Team - see emails below, Soyeon is our measles go to person.

Yelena- for specimens, please email Soyeon and copy Jasmine Matheson, and let them know number of specimens and tracking number moving forward.

Monica

Sent from my iPhone

On Jan 15, 2019, at 9:57 PM, Lippman, Soyeon I (DOH) <soyeon.lippman@doh.wa.gov> wrote:

Greetings everyone,

Thank you, Amy, for your kind note. I learned from the best – that is, Chas & Amy.

Please allow me to clarify that I'm at the office:
* Mon, Tues, Wed, Fri – All day.
* Thurs – 7:30 to 11am.

I'm truly looking forward to working with everyone.

In warm regards,
Soyeon

Soyeon Lippman, PhD
Epidemiologist | Tribal Liaison
Office of Communicable Disease Epidemiology
Division of Disease Control & Health Statistics
Washington State Department of Health
soyeon.lippman@doh.wa.gov
206-418-5590 | www.doh.wa.gov
<image002.png><image004.png><image006.png><image008.png><image010.png>

From: Poel, Amy J (DOH)
Sent: Tuesday, January 15, 2019 4:10 PM
To: Carlson, Alyssa (DOHi) <Alyssa.Carlson@clark.wa.gov>; Halstenson, Gentle <Gentle.Halstenson@clark.wa.gov>; Czapla, Monica <Monica.Czapla@clark.wa.gov>; Riethman, Madison (DOHi) <Madison.Riethman@clark.wa.gov>
Cc: Lippman, Soyeon I (DOH) <soyeon.lippman@doh.wa.gov>; Matheson, Jasmine S (DOH) <Jasmine.Matheson@DOH.WA.GOV>; DeBolt, Chas (DOH) <Chas.DeBolt@DOH.WA.GOV>; Boysun, Mike (DOH) <Mike.Boysun@DOH.WA.GOV>; Graff, Nicholas R (DOH) <nicholas.graff@doh.wa.gov>
Subject: CD Epi Measles contact

Hello all,

So that you will have excellent dedicated support here in CD Epi, Soyeon Lippman is going to take over for me as the person handling the DOH measles linelist, coordinating measles specimen testing, communicating measles lab testing results to you, and doing anything else you may need here from CD Epi. She will be performing these tasks M-R all day and Friday until noon. You can contact me after noon on Friday. You can reach her at the above e-mail or call her directly at 206-418-5590.

I will be handling all of the other VPD's (AFM, pertussis, diphtheria, tetanus, mumps, rubella, mening, h flu, varicella) and will be in the office and reachable through phone and email.

Amy

Amy J. Poel
Epidemiologist/Vaccine Preventable Disease Coordinator
Office of Communicable Disease Epidemiology
Division of Disease Control and Health Statistics
Washington State Department of Health
Amy.Poel@doh.wa.gov
206-418-5605 | www.doh.wa.gov
Fax 206-364-1060
Gender Pronouns: She/Her
<image011.png><image012.png><image013.png><image014.png><image015.png>

_____
From: Graham, Julie A (DOH)
Sent: 1/15/2019 6:27:34 PM
To: Kate Willson
Subject: Re: Russian informational materials

https://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/Measles#AboutMeasles
Here are our tool kits for various groups. Tomorrow I'll get additional info on our translations and send them to you.

Julie Graham
Gender Pronouns: her/she
Public Information Officer
Center for Public Affairs
Washington State Department of Health
julie.graham@doh.wa.gov
360-810-1628 | www.doh.wa.gov

Sent from my iPhone

On Jan 15, 2019, at 6:08 PM, Kate Willson <kate.willson@multco.us> wrote:

Lovely. I work in google folders here at the county. I'm going to share a folder with my materials on this outbreak. It has my content, a folder for images, a list of contacts...

Kate Willson
Communications Coordinator | Multnomah County
503-410-4524 | kate.willson@multco.us

On Tue, Jan 15, 2019 at 5:47 PM Graham, Julie A (DOH) <Julie.Graham@doh.wa.gov> wrote:

External -

hi Kate! We do! I'm away from my desk and will send them to you first thing tomorrow

Julie Graham
Gender Pronouns: her/she
Public Information Officer
Center for Public Affairs
Washington State Department of Health
julie.graham@doh.wa.gov

360-810-1628 | www.doh.wa.gov

Sent from my iPhone

On Jan 15, 2019, at 5:04 PM, Kate Willson <kate.willson@multco.us> wrote:

if you have any Russian FAQ materials on measles, I'd love to share them!

Kate Willson
Communications Coordinator | Multnomah County
503-410-4524 | kate.willson@multco.us

From: Susan Turner
Sent: 1/16/2019 12:58:34 PM
To: Flake, Marie D (DOH),Black, Ryan (DOH),Bodden, Jaime (DOHi),Burkland, Anne (DOHi),Calder, Allegra (DOHi),Courogen, Maria (DOH),Davis, Michelle (DOH),Debolt, Meghan (DOHi),Delahunt, Regina (DOHi),Dzedzy, Ed (DOHi),Goelz, Mary (DOHi),Halvorson, Clark R (DOH),Joyner, Pama (DOH),Ketchel, Jeff (DOHi),Kirkpatrick, Vicki (DOHi),Lindquist, Scott W (DOH),Melnick, Alan (DOHi),Miller, Angi (DOH),Rohr Tran, Holly (DOHi),Schanz, Matt (DOHi),Schuler, Christopher (DOHi),Tammy Axlund ,Wilson, Lyndia (DOHi),Windom, David (DOHi),Wolfe, Roxanne (DOHi),Worsham, Dennis (DOHi),York, Danette (DOHi)
Cc:
Subject: RE: FPHS TWG Meeting 1/18/19

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attachments\3A8DE67E2B754B53_image002.png

attachments\74FADBBC42914612_image020.png

attachments\E68F9AD076D74003_image006.png

attachments\0DEB0B8402304083_image014.png

attachments\7F486EE9763B41F3_image016.png

attachments\8C67D9049A3E4549_image004.png

attachments\00CD1D1C5D0C44BA_image012.png

attachments\82BAF083CAF34696_image008.png

attachments\871022C808F74FCC_image018.png

Hi Marie. I've noted some comments in bold and red font below. I'll have this list with me when we talk on Friday, but I thought it would be helpful for us to have the chance to start thinking about responses before the meeting. Thank you as always for helping us to be well prepared for our meetings! Sincerely, Susan

Susan Turner MD, MPH, MS | Health Officer
Kitsap Public Health District
345 6th St., Suite300 | Bremerton, WA 98337
(360)728-2250 Office | (360)728-2235 Main
susan.turner@kitsappublichealth.org | kitsappublichealth.org
<http://www.kitsappublichealth.org/>

<http://www.kitsappublichealth.org/>

<https://www.facebook.com/KitsapPublicHealthDistrict>

From: Flake, Marie D (DOH) <marie.flake@doh.wa.gov>
Sent: Friday, January 11, 2019 1:57 PM

To:
Subject: FPHS TWG Meeting 1/18/19

Dear TWG,
Happy New Year. We scheduled to meet next Friday, 1/18, 1:30-3pm to finalize the functional definitions – for this moment in time. Connection info is below and should be on your calendar.

Attached is the final draft version we have used for the past year with the tweaks this group settled on in December shown using track changes. I also incorporated the comment receive by e-mail from Susan after that meeting. Below is a summary of the proposed changes. Please review in advance so we can complete this task during the meeting. If you are not able to participate in the meeting, please send your comments in advance. Thank you.

Connection
* Webinar: https://global.gotomeeting.com/join/990414661
* Audio by phone: (872) 240-3212 / Access Code: 990-414-661
Summary of Proposed Changes to Functional Definitions – for discussion/approval by TWG on 1/18/19

* Page 29, G (CD) 1 (Data) – b (Immunization Information System) – Centralized Activity; c, d, f – adding effort for data input, quality, educating providers.--Agree

* Page 31, G (CD) 3 (Immunizations) & b – adding effort for promoting IIS and data input, quality, educating providers. Isn't the registry called the Washington IIS, or WIIS?

* Page 32, G (CD) 4 (Investigation) d – adding efforts to collect, package, ship and test CD samples; e – receive case reports from providers, labs and other reporters. In 4d recommend adding "package" between "…specimens," and "ship,"—thanks for adding "other reporters to 4.e.

* Page 34, G (CD) 5 (PHL) – Centralized Activity with support from PHSKC—Agree with changes, and agree with comment in margin that 24/7 COOP for LHJs to reach the lab and send specimens is covered in G.4.k.

* Page 41 & 42, I (EH) 3 (Investigations) – adding efforts to collect, package, ship and test EH samples—Page 42 G.3.j. needs to have "package" added as in the third bullet above

* Page 47, J (MCH) 3 (Newborn screening) – Centralized Activity--Agree

* Page 50, K (Access) 3 (Licensing) – Centralized Activity--Agree

* Page 52, L (VR) 1 (Data system) – Centralized Activity—Agree IF DOH is the only entity that does all of the functions (don't locals do L.1.d., e. f. g?)—also one thing I don't see is any local review of birth/death records for surveillance. Not sure LHJs do this, but I have heard rumors about Health Officers wanting to be informed for suspicious causes of death that represent public health threats, especially as relates to several proximate deaths due to one cause, infant and child deaths, or environmental threats. I don't know whether the TWG ever talked about that as an FPHS…

Talk with you next week.

Marie

Marie Flake
Special Projects

Systems Transformation I Office of the Secretary
Washington State Department of Health
Marie.Flake@doh.wa.gov
360-236-4063 | www.doh.wa.gov
360-951-7566
<https://twitter.com/wadepthealth?lang=en>
<https://www.facebook.com/WADeptHealth/>
<https://www.instagram.com/wadepthealth/>
<https://www.youtube.com/channel/UCTSCpezTD0TjiiAOuJY7f5w/doh>
<https://medium.com/@WADeptHealth>

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360-951-7566
<https://twitter.com/wadepthealth?lang=en>
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<https://medium.com/@WADeptHealth>

_____
From: EPIXUpdate@cdc.gov
Sent: 12/29/2018 2:11:05 AM
To: D'Angeli, Marisa (DOH)
Cc:
Subject: Epi-X Today: Saturday, December 29, 2018

Epi-X reports posted in your areas of interest in the past 24 hours. To view a specific report, click on its URL.

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
DGMQ TB Notification: Contact List for Flight EVA 0026 to SEA 10/30/2018 (DGMQ ID 194635) - WA
The attached file contains names of persons assigned to your jurisdiction, based on available information, who may have been exposed to tuberculosis on a flight.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69063

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
~*~ Global Immunization News Report, December 27, 2018 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Thursday, December 27, 2018.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69049

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~
~*~ Media Tracking Report, December 28, 2018 ~*~
Media stories include pertussis and congenital syphilis in California; influenza in multiple states; acute flaccid myelitis in Florida and Massachusetts; Legionnaires' in Michigan; measles in Nevada and New York; chickenpox in Australia and New Zealand; typhoid fever in Pakistan; and other media coverage.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69048

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(877) 438-3749
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From: Lippman, Soyeon I (DOH)
Sent: 1/15/2019 9:57:01 PM
To: Poel, Amy J (DOH),Carlson, Alyssa (DOHi),Halstenson, Gentle,Czapla, Monica,Riethman, Madison (DOHi)
Subject: RE: CD Epi Measles contact

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Greetings everyone,

Thank you, Amy, for your kind note. I learned from the best – that is, Chas & Amy.

Please allow me to clarify that I'm at the office:
* Mon, Tues, Wed, Fri – All day.
* Thurs – 7:30 to 11am.

I'm truly looking forward to working with everyone.

In warm regards,
Soyeon

Soyeon Lippman, PhD
Epidemiologist | Tribal Liaison
Office of Communicable Disease Epidemiology
Division of Disease Control & Health Statistics
Washington State Department of Health
soyeon.lippman@doh.wa.gov
206-418-5590 | www.doh.wa.gov
<https://twitter.com/wadepthealth?lang=en>
<https://www.facebook.com/WADeptHealth/>
<https://www.instagram.com/wadepthealth/>
<https://www.youtube.com/channel/UCTSCpezTD0TjiiAOuJY7f5w/doh>
<https://medium.com/@WADeptHealth>

From: Poel, Amy J (DOH)
Sent: Tuesday, January 15, 2019 4:10 PM
To: Carlson, Alyssa (DOHi) <Alyssa.Carlson@clark.wa.gov>; Halstenson, Gentle <Gentle.Halstenson@clark.wa.gov>; Czapla, Monica <Monica.Czapla@clark.wa.gov>; Riethman, Madison (DOHi) <Madison.Riethman@clark.wa.gov>
Cc: Lippman, Soyeon I (DOH) <soyeon.lippman@doh.wa.gov>; Matheson, Jasmine S (DOH) <Jasmine.Matheson@DOH.WA.GOV>; DeBolt, Chas (DOH) <Chas.DeBolt@DOH.WA.GOV>; Boysun, Mike (DOH) <Mike.Boysun@DOH.WA.GOV>; Graff, Nicholas R (DOH) <nicholas.graff@doh.wa.gov>
Subject: CD Epi Measles contact

Hello all,

So that you will have excellent dedicated support here in CD Epi, Soyeon Lippman is going to take over for me as the person handling the DOH measles linelist, coordinating measles specimen testing, communicating measles lab testing results to you, and doing anything else you may need here from CD Epi. She will be performing these tasks M-R all day and Friday until noon. You can contact me after noon on Friday. You can reach her at the above e-mail or call her directly at 206-418-5590.

I will be handling all of the other VPD's (AFM, pertussis, diphtheria, tetanus, mumps, rubella, mening, h flu, varicella) and will be in the office and reachable through phone and email.

Amy

Amy J. Poel
Epidemiologist/Vaccine Preventable Disease Coordinator
Office of Communicable Disease Epidemiology
Division of Disease Control and Health Statistics
Washington State Department of Health
Amy.Poel@doh.wa.gov
206-418-5605 | www.doh.wa.gov
Fax 206-364-1060
Gender Pronouns: She/Her
<https://twitter.com/wadepthealth?lang=en>
<https://www.facebook.com/WADeptHealth/>
<https://www.instagram.com/wadepthealth/>
<https://www.youtube.com/channel/UCTSCpezTD0TjiiAOuJY7f5w/doh>
<https://medium.com/@WADeptHealth>

From: Czapla, Monica
Sent: 1/16/2019 4:52:22 PM
To: 'Dennis L Drapiza','Gandara, Disha',Susan Soetaert (ssoetaer@lhs.org),'Gayle Seifullin'
Subject: Measles IP Partner Update Follow up


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Hi All,

Apologies for not getting this out earlier, it's been a day.

To summarize our call:
* Our investigators will directly notify you of new potential exposures within one of your facilities.
* We are asking you to send us a list of potentially exposed patients and staff. As well as also identify any high risk contacts (see info below), and make a recommendation for MMR and/or IG in the event the index case tests positive.
* We will include all possible facility exposures in future press releases including: facility name, address, date and times of concern for each exposure in future press releases and will be posted on our website.
* Our measles webpage. https://www.clark.wa.gov/public-health

Priorities for IG (for all we are considering exposed)

* Infants < 12 months
* Susceptible pregnant women
* Severely immunocompromised patients. Definition from the DOH guidelines:
* patients with severe primary immunodeficiency;
* patients who have received a bone marrow transplant until at least 12 months after finishing all immunosuppressive treatment, or longer in patients who have developed graft-versus-host disease;
* patients on treatment for ALL within and until at least 6 months after completion of immunosuppressive chemotherapy;
* and patients with a diagnosis of AIDS or HIV-infected persons with severe immunosuppression defined as CD4 percent 5 years) and those who have not received MMR vaccine since receiving effective ART.
* If supplies are available, you can also include HIV-infected persons who lack recent confirmation of immunologic status or measles immunity.

<https://www.clark.wa.gov/>

Monica Czapla, MPH
Program Manager - Infectious Diseases
PUBLIC HEALTH

564.397.8002 (note: our office area code has changed)
360.836.9086 cell

<https://www.facebook.com/pages/Clark-County-WA/1601944973399185>
<https://twitter.com/ClarkCoWA> <https://www.youtube.com/user/ClarkCoWa/>

From: DeBolt, Chas (DOH)
Sent: 1/16/2019 4:49:00 PM
To: Czapla, Monica (Monica.Czapla@clark.wa.gov),Carlson, Alyssa (DOHi)
Cc:
Subject: FW: 20190116_EpiUpdate.pptx

attachments\A8D02024D00A48C5_20190116_EpiUpdate.pptx

FYI.
Chas

From: Matheson, Jasmine S (DOH)
Sent: Tuesday, January 15, 2019 11:51 PM
To: Harry, Cynthia S (DOH) <cynthia.harry@doh.wa.gov>
Cc: DeBolt, Chas (DOH) <Chas.DeBolt@DOH.WA.GOV>
Subject: 20190116_EpiUpdate.pptx

Hi Cynthia
Please see attached slide summary of the epi for the 14 confirmed cases. I don't have full details to include regarding the 2 suspect cases as yet but we can get that information updated by the 1pm period previously agreed to in reporting case counts.
Thanks
Jasmine

From: Graham, Julie A (DOH)
Sent: 1/16/2019 9:36:27 AM
To: kate.willson@multco.us
Subject: Fwd: Russian informational materials

Hi Sharon,
Can you please send the numbers to Kate and Marissa?
I don't know if you have the 2018 numbers verified. If not please send the other years numbers.

Julie Graham
Gender Pronouns: her/she
Public Information Officer
Center for Public Affairs
Washington State Department of Health
julie.graham@doh.wa.gov
360-810-1628 | www.doh.wa.gov

Sent from my iPhone

Begin forwarded message:

From: Kate Willson <kate.willson@multco.us>
Date: January 16, 2019 at 9:24:00 AM PST
To: "Graham, Julie A (DOH)" <Julie.Graham@doh.wa.gov>
Subject: Re: Russian informational materials

Julie, do you know how many confirmed cases of measles were reported in Washington State between 2008 and the case from Jan 4, 2019? I'm pulling the same numbers for Oregon, and just wanted to include Washington.

Kate Willson
Communications Coordinator | Multnomah County
503-410-4524 | kate.willson@multco.us

On Tue, Jan 15, 2019 at 6:27 PM Graham, Julie A (DOH) <Julie.Graham@doh.wa.gov> wrote:

External -

https://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/Measles#AboutMeasles
Here are our tool kits for various groups. Tomorrow I'll get additional info on our translations and send them to you.

Julie Graham
Gender Pronouns: her/she
Public Information Officer
Center for Public Affairs
Washington State Department of Health
julie.graham@doh.wa.gov
360-810-1628 | www.doh.wa.gov

Sent from my iPhone

On Jan 15, 2019, at 6:08 PM, Kate Willson <kate.willson@multco.us> wrote:

Lovely. I work in google folders here at the county. I'm going to share a folder with my materials on this outbreak. It has my content, a folder for images, a list of contacts...

Kate Willson
Communications Coordinator | Multnomah County
503-410-4524 | kate.willson@multco.us

On Tue, Jan 15, 2019 at 5:47 PM Graham, Julie A (DOH) <Julie.Graham@doh.wa.gov> wrote:

External -

hi Kate! We do! I'm away from my desk and will send them to you first thing tomorrow

Julie Graham
Gender Pronouns: her/she
Public Information Officer
Center for Public Affairs
Washington State Department of Health
julie.graham@doh.wa.gov
360-810-1628 | www.doh.wa.gov

Sent from my iPhone

On Jan 15, 2019, at 5:04 PM, Kate Willson <kate.willson@multco.us> wrote:

if you have any Russian FAQ materials on measles, I'd love to share them!

Kate Willson
Communications Coordinator | Multnomah County
503-410-4524 | kate.willson@multco.us

From: Blanton, Lenee (CDC/DDID/NCIRD/ID)
Sent: 1/11/2019 9:57:34 AM
To:
Cc:
Subject: CDC/Influenza Division Weekly Surveillance Report and Technical Key Points

attachments\4EB9C0BEDB2A498B_FluView 201901.pdf

attachments\944AE55ADFF3494F_Influenza Summary and Technical K_PRDTOOL_NAMETOOLONG.pdf

Please find attached the CDC/Influenza Division Weekly Influenza Surveillance Report (FluView) for Week 1 ending January 5, 2019. Also attached are the seasonal influenza summary and technical key points.

Note to our partners: The attached key points contain the latest information about influenza this season. They are shared with our partners as a means of providing awareness of flu activity and other pertinent flu-related information, and as a helpful tool to maintain consistency in communicating flu-related messages. The key points are not intended for distribution to the public or posting to public web sites. Please visit http://www.cdc.gov/flu/ for content to share with the public.

CDC Influenza Division Summary & Technical Key Points
January 11, 2018

Summary Key Points

- *Flu activity continues to be elevated nationally and flu is widespread in most of the country.*
- *CDC today reported that so far this season, between about 6 million and 7 million people have been sick with flu, up to half of those people have sought medical care for their illness, and between 69,000 and 84,000 people have been hospitalized from flu.*
- *It's not too late to get a flu vaccine. Year in and year out, people who get a flu vaccine are better off than people who do not get vaccinated. Flu vaccines reduce the risk of flu illness, and potentially serious flu complications that can result in hospitalization. Flu vaccines have also been shown to be life-saving in children.*
- *People who are very sick or who are at high risk of serious flu complications and get flu symptoms should see a health care provider promptly for possible treatment with a flu antiviral drug.*
- *Visit www.cdc.gov/flu for more information.*

FluView Highlights, Week 1

- *The number of states reporting widespread geographic flu activity went from 24 during the week ending December 29 to 30 states during the week ending January 5.*
  - *Slight declines in activity were registered in the systems that track influenza-like-illness (ILI) and the percent of laboratory specimens from clinical laboratories testing positive for flu. Similar declines following the winter holidays have been observed during some previous seasons. ILI activity decreased from 4.0% for the week ending December 29 to 3.5% for the week ending January 5. Over the past 5 seasons, the peak of ILI has ranged from 3.6% (2015-2016) to 7.5% (2017-2018).*
  - *Reflecting the decline in ILI, the number of states experiencing high ILI went from 19 states plus New York City last week, to New York City and 15 states (AL, AZ, CO, GA, KY, LA, MD, MA, NE, NJ, NM, OK, SC, UT, and VA) this week.*
  - *The percent of respiratory specimens testing positive for flu at clinical laboratories declined from 16.6% to 12.7%. Since laboratory data from clinical and public health laboratories was disaggregated three seasons ago, the peak percent of respiratory specimens testing positive for flu at clinical laboratories has ranged from 23.6% to 27.4%.*
- *Hospitalization rates are relatively low.*
  - *This week, the overall hospitalization rate is 9.1 per 100,000. For the same week last season, the overall hospitalization rate was 30.5 per 100,000. [Over the past 5 seasons, cumulative end-of-season hospitalization rates have ranged from 31.4 per 100,000 (2015-2016) to 102.8 per 100,000 (2017-2018).]*
  - *Hospitalization rates in children younger than 5 years old are no longer the highest among all age groups. This week, the hospitalization rate among people 65 years and older was highest at 22.9 per 100,000, followed by children younger than 5 years (19.1 per 100,000). This is a more typical pattern for seasonal flu.*
- *Hospitalization rates for the current and previous seasons are available on FluView Interactive at https://gis.cdc.gov/GRASP/Fluview/FluHospRates.html.)*

Notes

CDC Influenza Division Summary & Technical Key Points
January 11, 2018

- *Preliminary in-season flu burden estimates are posted online and will be updated weekly at https://www.cdc.gov/flu/about/burden/preliminary-in-season-estimates.htm.*
- *A web spotlight on current flu activity and the preliminary in-season flu burden estimates for 2018-2019 was posted at https://www.cdc.gov/flu/spotlights/flu-season-updates-2018.htm*
- *This week, CDC began posting a summary of the flu forecasts generated through the Epidemic Prediction Initiative at: https://www.cdc.gov/flu/weekly/flusight/index.html. The summary forecasts will be updated weekly on Wednesdays.*

Technical Key Points
In this document:

Preliminary In-Season Estimates of 2018-2019 Flu Illnesses, Medical Visits and Hospitalizations

- We know that each year seasonal flu places a significant burden on the health of people in the United States each year, however, CDC does not know the exact number of people who have been sick sought medical care, or been hospitalized from flu influenza is not a reportable disease in most areas of the United States.
- However, these numbers are estimated using a mathematical model, based on observed rates of laboratory-confirmed influenza-associated hospitalizations.
- Newly released seasonal estimates of flu illnesses, medical visits, and hospitalizations occurring between October 1 and January 5 in the United States show:
    - 6.2 to 7.3 million people have been sick with flu
    - 2.9 to 3.5 million people have been to the doctor because of flu
    - 69,300 to 83,500 people have been hospitalized because of flu
- These burden estimates fill out the picture of the burden of flu nationally so far this season in the United States.
- To put these numbers into context, total, end-of-season estimates for flu illnesses, medical visits and hospitalizations going back to 2010 have ranged from:
    - 9.3 million to 49 million illnesses annually
    - 4.3 million to 23 million medical visits annually
    - 140,000 to 960,000 hospitalizations annually.
- For all of these estimates, the low end of the range occurred during the 2011-2012 flu season, while the high end of the range occurred last season (2017-2018).
- CDC has classified 2011-2012 as a "low" severity season, while 2017-2018 was a "high" severity season overall and across all age groups.

- These data are derived using the same mathematical model applied as far back as 2010 to estimate numbers of flu illnesses, medical visits and hospitalizations each season, and are based on data collected from a flu-associated hospitalization network that covers approximately 8.5% of the U.S. population, or about 27 million people.
- These preliminary estimates are based on crude rates of laboratory-confirmed influenza-associated hospitalizations, reported through the Influenza Hospitalization Surveillance Network (FluSurv-NET), which were adjusted for the frequency of influenza testing during recent seasons and the sensitivity of influenza diagnostic tests.
- Rates of hospitalization are multiplied by previously estimated ratio of hospitalizations to symptomatic illnesses, and frequency of seeking medical care to calculate symptomatic illnesses, and medical visits, respectively.
- The estimates are considered preliminary and may change each week as new laboratory-confirmed influenza-associated hospitalizations are reported to CDC.
- New reports include both new admissions that have occurred during the reporting week and also patients admitted in previous weeks that have been newly reported to CDC.
- Additionally, the estimates are cumulative and build on each other week to week and will be updated every Friday over the course of flu season.
- They represent estimates of what happened since the beginning of the season (Oct. 1, 2018) through the previous week.
- There isn't sufficient and complete data yet to estimate deaths due to flu this season. As we get more data, we will add this.
- More information on how CDC estimates the burden of seasonal influenza in the U.S. can be found here: https://www.cdc.gov/flu/about/burden/how-cdc-estimates.htm#References.

Key Flu Indicators

Below is a summary of the key flu indicators for the week ending January 5, 2019:

- **Influenza-like Illness Surveillance**: For the week ending January 5 (week 1), the proportion of people seeing their health care provider for influenza-like illness (ILI) was 3.5%, which is above the national baseline of 2.2%. Over the past five flu seasons, the peak percent of visits due to ILI has ranged between 3.6% (2015-2016) and 7.5% (2017-2018). All 10 regions reported a proportion of outpatient visits for ILI at or above their region-specific baseline level. Additional ILINet data, including national, regional, and select state-level data for the current and previous seasons, can be found at http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html.
- **Influenza-like Illness State Activity Indicator Map**: New York City and 15 states (Alabama, Arizona, Colorado, Georgia, Kentucky, Louisiana, Maryland, Massachusetts, Nebraska, New Jersey, New Mexico, Oklahoma, South Carolina, Utah, and Virginia) experienced high ILI activity. 12 states (Connecticut, Illinois, Indiana, Kansas, Minnesota, Mississippi, Missouri, New York, North Carolina, Pennsylvania, Texas, and Vermont) experienced moderate ILI activity. The District of Columbia, Puerto Rico, and 8 states (Arkansas, California, Michigan, Nevada, Oregon, Rhode

Island, Tennessee and Wisconsin) experienced low ILI activity. 15 states (Alaska, Delaware, Florida, Hawaii, Idaho, Iowa, Maine, Montana, New Hampshire, North Dakota, Ohio, South Dakota, Washington, West Virginia, and Wyoming) experienced minimal ILI activity. Additional data, including data for previous seasons, can be found at https://gis.cdc.gov/grasp/fluview/main.html.

- **Geographic Spread of Influenza Viruses:** Widespread influenza activity was reported by 30 states (Alabama, Arizona, California, Colorado, Connecticut, Delaware, Florida, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Massachusetts, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, Utah, Vermont, Virginia, and Wyoming). Regional influenza activity was reported by Puerto Rico and 17 states (Arkansas, Georgia, Illinois, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, North Dakota, Oklahoma, South Dakota, Tennessee, Texas, Washington, West Virginia, and Wisconsin). Local influenza activity was reported by two states (Hawaii and Mississippi). Sporadic influenza activity was reported by the District of Columbia, the U.S. Virgin Islands and one state (Alaska). Guam did not report. Geographic spread data show how many areas within a state or territory are seeing flu activity. Additional data are available at: https://gis.cdc.gov/grasp/fluview/FluView8.html.

- **Flu-Associated Hospitalizations**: Since October 1, 2018, 2,616 laboratory-confirmed influenza-associated hospitalizations have now been reported through the Influenza Hospitalization Network (FluSurv-NET), a population-based surveillance network for laboratory-confirmed influenza-associated hospitalizations covering approximately 9% of the U.S. This translates to a cumulative overall rate of 9.1 hospitalizations per 100,000 people in the United States.
    - The highest hospitalization rate is among adults aged 65 years and older (22.9 per 100,000) followed by children younger than 5 years (19.1 per 100,000), and adults aged 50-64 years (11.5 per 100,000). During most seasons, adults 65 years and older have the highest hospitalization rates followed by young children.
    - Additional data, including hospitalization rates during previous influenza seasons, can be found at http://gis.cdc.gov/GRASP/Fluview/FluHospRates.html and http://gis.cdc.gov/grasp/fluview/FluHospChars.html.

- **Mortality Surveillance**: The proportion of deaths attributed to pneumonia and influenza (P&I) was 6.4% during the week ending December 29, 2018 (week 52). This percentage is below the epidemic threshold of 7.0% for week 52 in the National Center for Health Statistics (NCHS) Mortality Surveillance System. Additional P&I mortality data for current and past seasons and by geography (national, HHS region, or state) are available at https://gis.cdc.gov/grasp/fluview/mortality.html

CDC Influenza Division Summary & Technical Key Points
January 11, 2018

- **Pediatric Deaths:** Three influenza-associated pediatric deaths were reported to CDC during week 1 (the week ending January 5, 2019).
  - One death was associated with an influenza A(H3) virus, one death was associated with an influenza A(H1N1)pdm09 virus and one death was associated with an influenza A virus for which no subtyping was performed. All three deaths occurred during week 52 (the week ending December 29, 2018).
  - A total of 16 influenza-associated pediatric deaths have been reported for the 2018-2019 season.
  - Additional information on influenza-associated pediatric deaths reported during past seasons, including basic demographics, underlying conditions, bacterial co-infections, and place of death is available on FluView Interactive at: https://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html. More detailed information about pediatric deaths reported during the current season will be available later in the season.

- **Laboratory Data**:

  - Nationally, the percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories during the week ending January 5 was 12.7%.
  - Regionally, the three-week average percent of specimens testing positive for influenza in clinical laboratories ranged from 8.0% to 20.9%.
  - During the week ending January 5, of the 4,460 (12.7%) influenza-positive tests reported to CDC by clinical laboratories, 4,347 (97.5%) were influenza A viruses and 113 (2.5%) were influenza B viruses.
  - The most frequently identified influenza virus type reported by public health laboratories was influenza A(H1N1)pdm09 virus.
  - During the week ending January 5, 440 (99.1%) of the 444 influenza-positive tests reported to CDC by public health laboratories were influenza A viruses and 4 (0.9%) were influenza B viruses. Of the 390 influenza A viruses that were subtyped, 68 (17.4%) were H3N2 viruses and 322 (82.6%) were (H1N1)pdm09 viruses.
  - The majority of the influenza viruses collected from the United States during September 30, 2018 through January 5, 2019 were characterized antigenically and genetically as being similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
  - None of the viruses tested from September 30, 2019-January 5, 2019 were found to be resistant to oseltamivir, zanamivir, or peramivir.

- FluView is available – and past issues are archived – on the CDC website.

CDC Influenza Division Summary & Technical Key Points
January 11, 2018

- Note: Delays in reporting may mean that data changes over time. The most up to date data for all weeks during the 2018-2019 season can be found on the current FluView and FluView Interactive.

Flu-Related Pediatric Deaths

- CDC is reporting three more flu-related pediatric deaths this week, bringing the total to 16 for the 2018-2019 flu season.
    - Note: This total of 16 does not yet include a laboratory-confirmed flu-associated pediatric death that occurred in a Guatemalan child who became ill in El Paso, was treated at a New Mexico hospital, and died the week ending December 29, that received national media attention. An official report for this pediatric death has not yet been submitted to CDC. This death will be reported once an Influenza-Associated Pediatric Mortality Case Report Form is submitted.
- Nine of the 16 reported deaths were associated with influenza A(H1N1)pdm09 viruses; two with an influenza A(H3N2) virus; four with influenza A viruses for which no subtyping was performed; and one with an influenza B virus.
- Because of confidentiality issues, CDC does not discuss or give details on individual people.
- Since 2004, when pediatric deaths associated with influenza infection became nationally notifiable, the number of deaths reported to CDC each year has ranged from 37 (2011-2012 season) to 185 deaths (2017-2018 season).
- It's important to note that the actual number of flu deaths in children is thought to be higher than what is reported by states to CDC because not all flu deaths in children are detected/reported.
- CDC estimates the numbers of flu-related deaths using statistical models to account for likely under-reporting.
- CDC estimates that the actual number of deaths associated with influenza in children during 2017-2018 was closer to 600, based on mathematical modeling.
- The difference between reported flu deaths and estimated flu deaths in children last season is consistent with previously published reports that have found that the estimated numbers of flu-related deaths in children from statistical models may be two to three times higher than the number of reported deaths.
- During past seasons, approximately 80% of flu-associated deaths in children have occurred in children who were not vaccinated. This proportion was similar for the 2017-2018 season.
- Even otherwise healthy children can get very sick and die from flu.
- Since the 2010-2011 season, between about 40% and 60% of pediatric deaths have occurred in children who were otherwise healthy and did not have an underlying medical condition.
- The single best way to protect against seasonal flu and its potentially severe consequences in children is to get a seasonal flu vaccine each year.
- Vaccination is important for children younger than 5 years old. It is especially important for those younger than 2 years old and children of any age with a long-term health condition like asthma, diabetes and heart disease and neurological and neurodevelopmental diseases. These children are at higher risk of serious flu complications if they get the flu.
- Yearly vaccination also is especially important for people in contact with high-risk children in order to protect the child (or children) in their lives from the flu. In particular, children younger than 6 months old are too young to be vaccinated themselves but are at high risk of flu

complications if they get sick so the people around them should get vaccinated to protect the infant.

- Some children 6 months through 8 years old require two doses of influenza vaccine. Children in this age group who are getting vaccinated for the first time will need two doses. Some children who have received influenza vaccine previously also will need two doses this season. A health care provider should be consulted to determine whether two doses are recommended for a child.
- Flu-associated deaths in children younger than 18 years old should be reported through the Influenza-Associated Pediatric Mortality Surveillance System. The number of flu-associated deaths among children reported during the 2018-2019 flu season will be updated each week and can be found at http://www.cdc.gov/flu/weekly and https://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html.

Flu Forecasting

- Flu forecasting aims to predict future seasonal flu activity before it occurs, potentially reducing the impact of flu.
- Flu forecasts can be used to prepare for and prevent illness, hospitalization, and death, as well as the economic burden, experienced each flu season.
- CDC's efforts with forecasting began in 2013 with the "Predict the Influenza Season Challenge", a competition that encouraged external researchers to forecast the timing, peak, and intensity of the flu season.
- More than 20 teams are providing weekly forecasts to CDC during the 2018-2019 flu season. These forecasts utilize a variety of methods and data sources.
- As part of this effort, CDC provides relevant surveillance data to participating teams, analyzes and visualizes the forecasts, and collaborates with forecasters and state and local public health officials to improve the accuracy and usefulness of the forecasts.
- At the conclusion of each challenge, CDC determines how accurate each team's forecasts were by scoring forecasts against actual flu activity.
- CDC has developed the "FluSight" flu forecasting website, which displays the national, regional, and state-level forecasts on an interactive website. Learn more at https://predict.cdc.gov/
- This season, in addition to the visualization of weekly flu forecasts found at https://predict.cdc.gov/, CDC will be posting a short summary of the forecasts each week.
- This summary will be available at https://www.cdc.gov/flu/weekly/flusight/index.html. Additional background information on CDC's forecasting efforts, how forecasting works, and why it's important to forecast the flu are available at this site as well.
- Accurate influenza forecasts offer the possibility to more effectively plan for and respond to seasonal flu epidemics and future influenza pandemics.
- For example, forecasts can help prepare for the influx of illnesses and hospitalizations associated with peak flu season by informing the distribution and placement of health care staff and treatment resources.

Call to Action for 2018-2019 & Vaccine Benefits

- It's not too late to get vaccinated!

CDC Influenza Division Summary & Technical Key Points
January 11, 2018

- CDC recommends a yearly flu vaccine as the best way to protect against influenza and its potentially serious complications.
- There are many **benefits of flu vaccination**.
    - Flu vaccination can keep you from getting sick with flu.
    - Flu vaccination can reduce your risk of flu-associated hospitalization.
    - Flu vaccine can be life-saving in children.
    - Vaccination helps protect women during and after pregnancy and can protect the baby from flu illness for several months after birth.
        - Most recently, a paper published in Clinical Infectious Diseases on October 11, 2018 showed that over the course of six flu seasons, getting a flu shot reduced a pregnant woman's risk of being hospitalized from flu by an average of 40 percent.
    - Flu vaccination helps prevent serious medical events associated with some chronic conditions (heart and lung disease, diabetes).
        - Vaccination can reduce the risk of heart attack in people with heart disease.
        - Flu vaccination also has been shown in separate studies to be associated with reduced hospitalizations among people with diabetes and chronic lung disease.
    - Flu vaccination prevents millions of flu illnesses and doctors' visits and tens of thousands of hospitalizations each season.
    - Some people who get vaccinated do get sick, but vaccination has been shown to make illness less severe.
        - A 2017 study showed that flu vaccination reduced deaths, intensive care unit (ICU) admissions, ICU length of stay, and overall duration of hospitalization among hospitalized flu patients.
        - A 2018 study showed that among adults hospitalized with flu, vaccinated patients were 59 percent less likely to be admitted to the ICU than those who had not been vaccinated. Among adults in the ICU with flu, vaccinated patients on average spent 4 fewer days in the hospital than those who were not vaccinated.
    - More detailed information on flu vaccine benefits can be found at https://www.cdc.gov/flu/prevent/vaccine-benefits.htm.
- Flu vaccines this season have been updated to match the viruses research suggest will be most common.
- There are many different flu vaccine options, including nasal spray flu vaccine.
    - Other options include high dose and adjuvanted vaccine for people 65 years and older.
    - While there are many different flu viruses, flu vaccines protect against the 3 or 4 viruses that research suggests will be most common.
    - Get vaccinated now.
- Manufacturers have projected that as many 163 million to 168 million doses of flu vaccine will be available in the United States this season; as of December 14, 2018, more than 166 million doses of flu vaccine had already been distributed. This is the most seasonal flu vaccine that has ever been distributed.
- Regular updates on the number of influenza vaccine doses distributed is available at: https://www.cdc.gov/flu/about/qa/index.htm.
- It is not possible to say at this time how severe this flu season will be like.
- While flu spreads every year, the timing, severity, and length of the season varies from one season to another.
- In recent weeks, H1N1 viruses have been most common nationally, except for in the southeastern part of the country where H3N2 viruses have been most common.

CDC Influenza Division Summary & Technical Key Points
January 11, 2018

Summary of CDC 2018-2019 Flu Vaccine Guidance

- CDC guidance for the 2018-2019 is published and available at: 'Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2018–19 Influenza Season'
- CDC recommends annual influenza vaccination for everyone 6 months and older with any licensed, age-appropriate flu vaccine (IIV, RIV4, or LAIV4) with no preference expressed for any one vaccine over another.

Summary of CDC 2018-2019 Antiviral Guidance

- CDC recommends treatment of severely ill and high-risk patients with flu symptoms with an influenza antiviral medication as soon as possible without waiting for confirmatory testing.
- Antiviral drugs also can be used to treat outpatients with uncomplicated influenza within two days of symptom onset based on clinical discretion.
- Antiviral drugs work best when started within two days of symptom onset.
- Patients at high risk of developing serious flu complications include pregnant women, people 65 years and older, children younger than 5 years but especially children younger than 2 years, and people with certain underlying medical conditions including heart disease, diabetes, people with neurological or neurodevelopmental conditions, and people with weakened immune systems.
- This guidance is summarized in "Influenza Antiviral Medications: Summary for Clinicians" on the CDC web site.
- This guidance is consistent with the 2018-2019 flu season recommendations published by the Infectious Diseases Society of America (IDSA) on December 19 in Clinical Infectious Diseases.
- Four FDA-approved influenza antiviral drugs are recommended for use in the United States during the 2018-2019 influenza season: oseltamivir (Tamiflu® and generic formulations), zanamivir (Relenza®), peramivir (Rapivab®), and baloxavir (Xofluza®).

Early-Season Influenza Vaccination Coverage

Below is a summary of early-season influenza vaccination coverage estimates:

- **Children:** Flu vaccination coverage was 45.6% by mid-November 2018 for children 6 months to 17 years old. Coverage is up 6.8 percentage points, compared to the same time during the 2017–18 flu season (38.8%).
- **Adults:** Flu vaccination coverage was 44.9% by mid-November 2018 for adults 18 years and older. Compared to the same time during the 2017–18 flu season:
    - Coverage is up 6.4 percentage points for all adults.
    - Coverage is up 5.9 percentage points for adults 18–64 years old with high-risk conditions.
    - Coverage is up 6.3 percentage points for adults18–64 years old without high-risk conditions.

Take 3 Framework

1. **Take time to get a flu vaccine each year.**

- While there are many different flu viruses, flu vaccines protect against the 3 or 4 viruses that research suggests will be most common. Three-component vaccines contain an H3N2, an H1N1 and a B virus. Four component vaccines have an additional B virus component. (See Vaccine Virus Selection for this season's vaccine composition.)
- Most U.S. flu vaccines are four-component vaccines.
- Flu vaccination can reduce flu illnesses, doctors' visits, and missed work and school due to flu, as well as prevent flu-related hospitalizations.
- Flu vaccination also has been shown to significantly reduce a child's risk of dying from influenza.
- Also, there are data to suggest that even if someone gets sick after vaccination, their illness may be milder.
- Everyone 6 months of age and older should get a flu vaccine every year before flu activity begins in their community. Learn more about vaccine timing.
- For the 2018-2019 flu season, CDC and its Advisory Committee on Immunization Practices (ACIP) recommend annual influenza vaccination for everyone 6 months and older with any licensed, age-appropriate flu vaccine (inactivated, recombinant or nasal spray flu vaccines) with no preference expressed for any one vaccine over another. (See Types of Flu Vaccines).
- Vaccination of high risk persons is especially important to decrease their risk of severe flu illness.
- People at high risk of serious flu complications include young children, pregnant women, people with chronic health conditions like asthma, diabetes or heart and lung disease and people 65 years and older.
- Vaccination also is important for health care workers, and other people who live with or care for high risk people to keep from spreading flu to them.
- Infants younger than 6 months are at high risk of serious flu illness, but are too young to be vaccinated. Studies have shown that flu vaccination of the mother during pregnancy can protect the baby after birth from flu infection for several months. People who live with or care for infants should be vaccinated.

2. Take everyday preventive actions to stop the spread of germs.

- Try to avoid close contact with sick people.
- While sick, limit contact with others as much as possible to keep from infecting them.
- If you are sick with flu-like illness, CDC recommends that you stay home for at least 24 hours after your fever is gone except to get medical care or for other necessities. (Your fever should be gone for 24 hours without the use of a fever-reducing medicine.)
- Cover your nose and mouth with a tissue when you cough or sneeze. After using a tissue, throw it in the trash and wash your hands.
- Wash your hands often with soap and water. If soap and water are not available, use an alcohol-based hand rub.
- Avoid touching your eyes, nose and mouth. Germs spread this way.
- Clean and disinfect surfaces and objects that may be contaminated with germs like flu.

3. **Take antiviral drugs for treatment if your doctor prescribes them.**
    - If you get sick with flu, antiviral drugs can be used to treat your illness.
    - Antiviral drugs are prescription medicines (pills, liquid or an inhaled powder) and are not available over the counter.
    - Antiviral drugs are different from antibiotics.
    - Antiviral drugs can make illness milder and shorten the time you are sick when treatment is started soon after illness onset. Early antiviral treatment may also prevent some flu complications.
    - CDC recommends prompt antiviral treatment of people who are severely ill and people who are at high risk of serious flu complications who develop flu symptoms.
    - For people with high-risk factors, starting treatment with an antiviral drug soon after flu symptoms begin may reduce the risk of some complications and development of more severe illness that could result in a hospital stay.
    - Studies show that flu antiviral drugs work best for treatment when they are started within 48 hours of getting sick, but starting them later can still be helpful, especially if the sick person has a high-risk health condition or is very sick from flu. Follow your doctor's instructions for taking this drug.
    - Influenza antiviral drugs also can be used to treat uncomplicated influenza illness in otherwise healthy people based on clinical discretion if the patient presents within 2 days of symptom onset.
    - Influenza antiviral drugs are the only drugs approved to treat influenza.
    - Four FDA-approved influenza antiviral drugs are recommended for use in the United States during the 2018-2019 influenza season: oseltamivir (Tamiflu® and generic formulations), zanamivir (Relenza®), peramivir (Rapivab®) and baloxavir marboxil (trade name Xofluza®).
    - Antiviral drugs are not a substitute for getting a flu vaccine. Getting a flu vaccine is the best way to reduce the risk of flu illness and its potentially serious outcomes.

From: Fuller, Mackenzie S (DOH Fellow)
Sent: 1/16/2019 6:59:25 AM
To: Hawkins, Vivian (DOH),Oltean, Hanna (DOH),'Erica Grant',Tyer, Lana K (DOH),Pecha, Monica J (DOH),DeBolt, Chas (DOH),Gulati, Reena (CDC/OID/NCEZID),Matheson, Jasmine S (DOH)
Cc:
Subject: Civil surgeons abstract for NTCA

attachments\DD6A22BE304B4CF7_NTCA_CivilSurgeons_Abstract_1.16.19.docx

Good morning,

Please see the attached draft abstract for submission to the National TB Conference. The word count limit is 350 words, and the current word count is 361. Please review the abstract and send me any edits (especially ways to cut 11 words!) by 7am tomorrow so we can submit it into CDC Clearance by Thursday.

Thanks!

Mackenzie

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<https://www.youtube.com/channel/UCTSCpezTD0TjiiAOuJY7f5w/doh>
<https://medium.com/@WADeptHealth>

From: Susan Turner
Sent: 1/16/2019 1:00:11 PM
To: Flake, Marie D (DOH),Black, Ryan (DOH),Bodden, Jaime (DOHi),Burkland, Anne (DOHi),Calder, Allegra (DOHi),Courogen, Maria (DOH),Davis, Michelle (DOH),Debolt, Meghan (DOHi),Delahunt, Regina (DOHi),Dzedzy, Ed (DOHi),Goelz, Mary (DOHi),Halvorson, Clark R (DOH),Joyner, Pama (DOH),Ketchel, Jeff (DOHi),Kirkpatrick, Vicki (DOHi),Lindquist, Scott W (DOH),Melnick, Alan (DOHi),Miller, Angi (DOH),Rohr Tran, Holly (DOHi),Schanz, Matt (DOHi),Schuler, Christopher (DOHi),Tammy Axlund ,Wilson, Lyndia (DOHi),Windom, David (DOHi),Wolfe, Roxanne (DOHi),Worsham, Dennis (DOHi),York, Danette (DOHi)
Cc:
Subject: RE: FPHS TWG Meeting 1/18/19 - proposed language for lab

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attachments\3BC23454623A4481_image023.png

attachments\9D9B342753BF4669_image028.png

This is excellent, and for my part, I agree. Susan

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From: Flake, Marie D (DOH) <marie.flake@doh.wa.gov>
Sent: Tuesday, January 15, 2019 4:15 PM
To: Black, Ryan (DOH) <Ryan.Black@DOH.WA.GOV>; Bodden, Jaime (DOHi) <Jbodden@wsac.org>; Burkland, Anne (DOHi) <Anne.Burkland@kingcounty.gov>; Calder, Allegra (DOHi) <allegra@berkconsulting.com>; Courogen, Maria (DOH)

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Subject: FPHS TWG Meeting 1/18/19 - proposed language for lab

TWG,
I'm share this with Ed's permissions. He has a proposal for your consideration.

I was reviewing the definitions and I struggled with the definition around lab sampling, so I created my own definition that sounds better to me. How about this:

"Utilizing scientific methods and best practices, when indicated, to collect environmental samples and human specimens for laboratory analysis to confirm or rule out disease presence. This includes packaging in conformance with DOT and USPS requirements and shipping to a certified laboratories for analysis."

Perhaps this would replace the definitions identified in:

Page 32, G (CD) 4 (Investigation) d – adding efforts to collect, package, ship and test CD samples
Page 41 & 42, I (EH) 3 (Investigations) – adding efforts to collect, package, ship and test EH samples

Just a thought

Ed Dzedzy
Lincoln County

From: Flake, Marie D (DOH) [mailto:marie.flake@doh.wa.gov]
Sent: Friday, January 11, 2019 1:57 PM
To: Black, Ryan (DOH) <Ryan.Black@DOH.WA.GOV>; Bodden, Jaime (DOHi) <Jbodden@wsac.org>; Burkland, Anne (DOHi) <Anne.Burkland@kingcounty.gov>; Calder, Allegra (DOHi) <allegra@berkconsulting.com>; Courogen, Maria (DOH) <Maria.Courogen@DOH.WA.GOV>; Davis, Michelle (DOH) <Michelle.Davis@sboh.wa.gov>; Debolt, Meghan (DOHi) <mdebolt@co.walla-walla.wa.us>; Delahunt, Regina (DOHi) <rdelahun@whatcomcounty.us>; Ed Dzedzy <edzedzy@co.lincoln.wa.us>; Flake, Marie D (DOH) <marie.flake@doh.wa.gov>; Goelz, Mary (DOHi) <mgoelz@co.pacific.wa.us>; Halvorson, Clark R (DOH) <Clark.Halvorson@DOH.WA.GOV>; Joyner, Pama (DOH) <Pama.Joyner@DOH.WA.GOV>; Ketchel, Jeff (DOHi) <jketchel@snohd.org>; Kirkpatrick, Vicki (DOHi) <VKirkpatrick@co.jefferson.wa.us>; Lindquist, Scott W (DOH) <scott.lindquist@doh.wa.gov>; Melnick, Alan (DOHi) <alan.melnick@clark.wa.gov>;

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Subject: FPHS TWG Meeting 1/18/19

Dear TWG,
Happy New Year. We scheduled to meet next Friday, 1/18, 1:30-3pm to finalize the functional definitions – for this moment in time. Connection info is below and should be on your calendar.

Attached is the final draft version we have used for the past year with the tweaks this group settled on in December shown using track changes. I also incorporated the comment receive by e-mail from Susan after that meeting. Below is a summary of the proposed changes. Please review in advance so we can complete this task during the meeting. If you are not able to participate in the meeting, please send your comments in advance. Thank you.

Connection
* Webinar: https://global.gotomeeting.com/join/990414661
* Audio by phone: (872) 240-3212 / Access Code: 990-414-661
Summary of Proposed Changes to Functional Definitions – for discussion/approval by TWG on 1/18/19

* Page 29, G (CD) 1 (Data) – b (Immunization Information System) – Centralized Activity; c, d, f – adding effort for data input, quality, educating providers.

* Page 31, G (CD) 3 (Immunizations) & b – adding effort for promoting IIS and data input, quality, educating providers.

* Page 32, G (CD) 4 (Investigation) d – adding efforts to collect, package, ship and test CD samples; e – receive case reports from providers, labs and other reporters.

* Page 34, G (CD) 5 (PHL) – Centralized Activity with support from PHSKC

* Page 41 & 42, I (EH) 3 (Investigations) – adding efforts to collect, package, ship and test EH samples

* Page 47, J (MCH) 3 (Newborn screening) – Centralized Activity

* Page 50, K (Access) 3 (Licensing) – Centralized Activity

* Page 52, L (VR) 1 (Data system) – Centralized Activity

Talk with you next week.

Marie

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<https://medium.com/@WADeptHealth>

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<https://medium.com/@WADeptHealth>

From: Rivera, Aidsa (CDC/DDID/NCEZID/DVBD)
Sent: 1/3/2019 10:54:27 AM
To: Rivera, Aidsa (CDC/DDID/NCEZID/DVBD)
Cc:
Subject: Dengue -- United States, 2018

attachments\E7CA98B252E84B3C_DengueArboNET_Dec312018.pdf

Colleagues,

Attached please find the dengue surveillance report with provisional data reported to ArboNET as of Monday, December 31, 2018. Should you have any questions regarding the content of the report, please contact me, Aidsa Rivera (erj2@cdc.gov) from CDC Dengue Branch.

Please let me know if you have any questions or if you would like to be removed from this distribution list.

Regards,

Aidsa

Aidsa Rivera, MS
Epidemiologist/Surveillance Officer
Centers for Disease Control and Prevention, NCEZID, DVBD, Dengue Branch

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Provisional data

Dengue activity – United States, 2018
Provisional data reported to ArboNET
Monday, December 31, 2018

In 2010, dengue became a nationally reportable condition following approval by the Council of State and Territorial Epidemiologists, and case definitions were revised in 2015. ArboNET is a national electronic surveillance system for arboviral diseases in the U.S. administered by CDC. ArboNET was developed in response to the West Nile virus (WNV) epidemic in 1999 and non-WNV arboviral diseases were added to the system beginning in 2003.

Dengue cases have been reported to ArboNET since 2003. To better capture epidemiologic data on travel-associated cases, a dengue module was added in 2012. ArboNET data on reported dengue cases began to be disseminated to state health departments via weekly reports starting in August 2015.

In the United States, dengue presents in three epidemiologic settings:

- Endemic transmission – occurs in tropical areas where *Aedes* species mosquitoes are always present and dengue virus (DENV) transmission occurs throughout the year (e.g., Puerto Rico, Virgin Islands).
- Travel-associated cases – occurs in persons infected with a DENV while traveling to a dengue-endemic area of the world. Such cases are most often observed in regions of the U.S. where dengue is not endemic.
- Sporadic outbreaks – occurs in parts of the US where *Aedes sp.* mosquitoes exist, and are usually initiated from a returning traveler that is infected with the virus (e.g., Florida, US-Mexico border states).

The objectives of dengue reporting in ArboNET is to monitor disease epidemiology, provide timely information to public health official, and to monitor prevention efforts.

This update from the CDC Dengue Branch includes provisional data reported to ArboNET for **January 1, 2018 – December 31, 2018** for nationally notifiable dengue disease from 50 states and five territories. (Additional resources for dengue disease information and data are included on page 8). In some areas, **2010-2017** summarized data is also provided for the purposes of comparison.

Dengue activity in 2018

As of December 31, 2018, forty-two states and three territories have reported dengue cases to ArboNET for 2018. **[Figure 1]**.

Figure 1. Laboratory-positive travel-associated and locally-acquired dengue cases from the 50 states and five territories — United States, 2018 as of December 31, 2018.

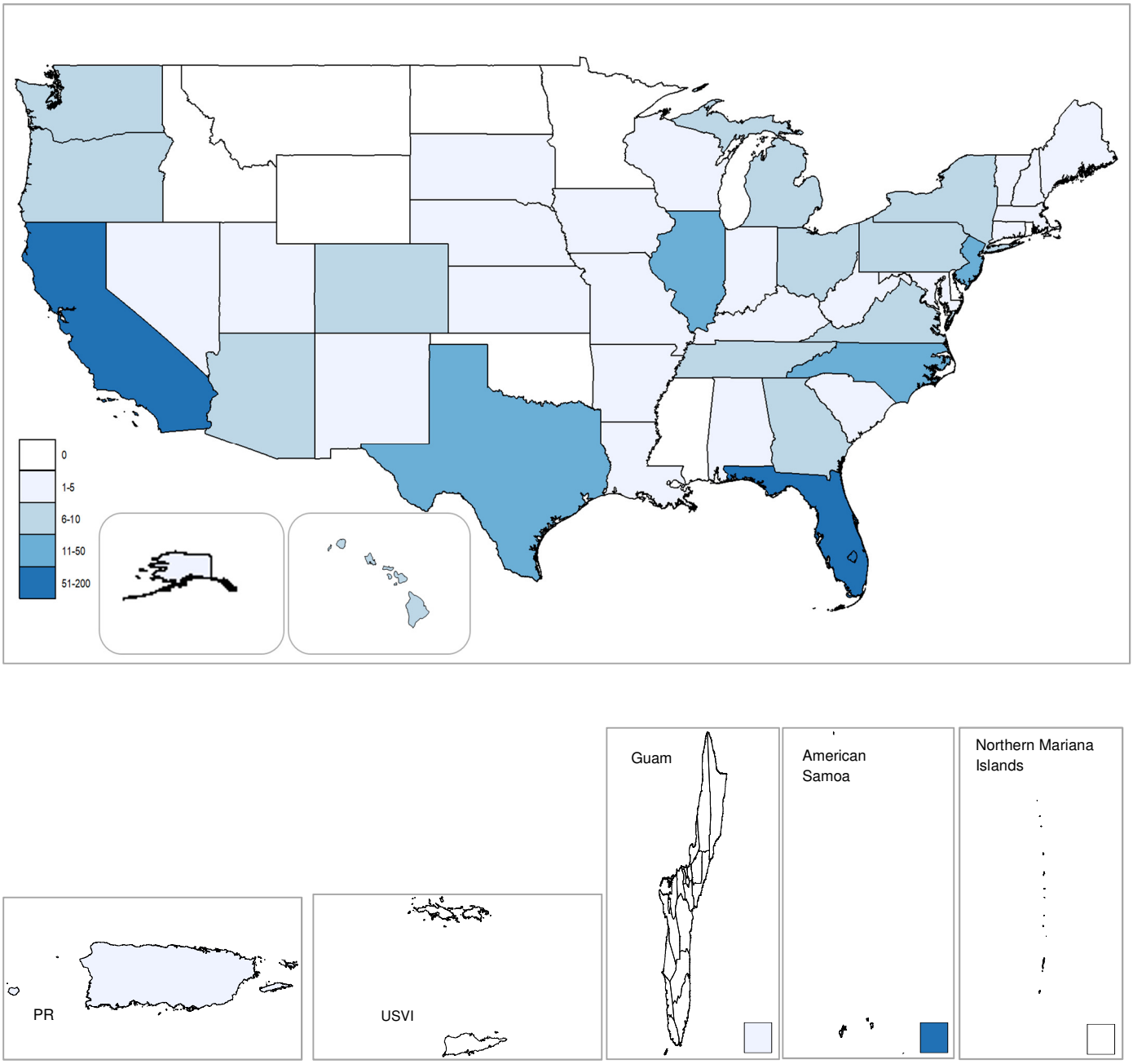


Table 1. Cumulative laboratory-positive[ǂ] dengue cases reported to ArboNET by state and status of travel history — United States, 2018 (as of December 31, 2018) compared to 2010-2017 summarized data.

State	2018		2010-2017			
	Travel-associated cases	Locally-acquired cases[ǂǂ]	Travel-associated cases		Locally-acquired cases[ǂǂ]	
	No.	No.	Median	Range (Min. – Max.)	Median	Range (Min. – Max.)
Total	338	154	3	0-197	0.5	0-10911
Alabama	3	0	4	0-5	0	0-0
Alaska	2	0	1	0-5	0	0-0
American Samoa	0	150	0	0-1	0	0-199
Arizona	8	0	10	1-98	0	0-0
Arkansas	2	0	1	0-4	0	0-0
California	79	0	116.5	5-197	0	0-0
Colorado	9	0	3	0-21	0	0-0
Connecticut	2	0	4.5	0-18	0	0-0
Delaware	0	0	1	0-2	0	0-0
District of Columbia	2	0	1	0-11	0	0-0
Florida	52	1	79	16-137	5.5	0-58
Georgia	6	0	8.5	4-20	0	0-0
Guam	3	0	0	0-1	0	0-0
Hawaii	10	0	10	0-19	0	0-200
Idaho	0	0	1	0-4	0	0-0
Illinois	14	0	22	7-35	0	0-0
Indiana	1	0	5.5	0-14	0	0-0
Iowa	5	0	4	2-11	0	0-0
Kansas	2	0	3	1-8	0	0-0
Kentucky	2	0	1	0-4	0	0-0
Louisiana	2	0	4.5	1-6	0	0-0
Maine	2	0	1	0-6	0	0-0
Maryland	5	0	8.5	0-13	0	0-0
Massachusetts	2	0	2	0-17	0	0-0
Michigan	6	0	9	5-16	0	0-0
Minnesota	0	0	11.5	0-29	0	0-0
Mississippi	0	0	1	0-2	0	0-0
Missouri	1	0	4	0-13	0	0-0
Montana	0	0	2	0-5	0	0-0
Nebraska	1	0	0.5	0-7	0	0-0
Nevada	1	0	2.5	0-6	0	0-0

New Hampshire	1	0	0.5	0-5	0	0-0
New Jersey	20	0	21.5	0-84	0	0-0
New Mexico	1	0	0.5	0-5	0	0-0
New York	8	0	111.5	32-183	0	0-1
North Carolina	10	1[¥]	8	0-13	0	0-0
North Dakota	0	0	1	0-2	0	0-0
Northern Mariana Islands	0	0	0	0-0	0	0-0
Ohio	7	0	7.5	2-16	0	0-0
Oklahoma	0	0	2	0-5	0	0-0
Oregon	10	0	0	0-9	0	0-0
Pennsylvania	9	0	21	4-24	0	0-0
Puerto Rico	1	1	0	0-0	1034	9-10911
Rhode Island	0	0	2	0-9	0	0-0
South Carolina	3	0	3	0-13	0	0-0
South Dakota	1	0	1.5	0-3	0	0-0
Tennessee	6	0	4.5	1-13	0	0-0
Texas	17	1	33	7-71	0	0-24
U.S. Virgin Islands	0	0	0	0-1	7	0-174
Utah	2	0	0.5	0-6	0	0-0
Vermont	1	0	3	0-4	0	0-0
Virginia	8	0	16.5	8-28	0	0-0
Washington	6	0	17	9-24	0	0-0
West Virginia	1	0	0.5	0-2	0	0-0
Wisconsin	4	0	8	5-17	0	0-0
Wyoming	0	0	0	0-1	0	0-0

[ǂ] Includes confirmed and probable dengue cases, the case definitions for which can be found online at: http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/case-definition/2015/

[ǂǂ] No history of travel to a dengue-endemic region in the 14 days before illness onset

[¥] Laboratory acquired case

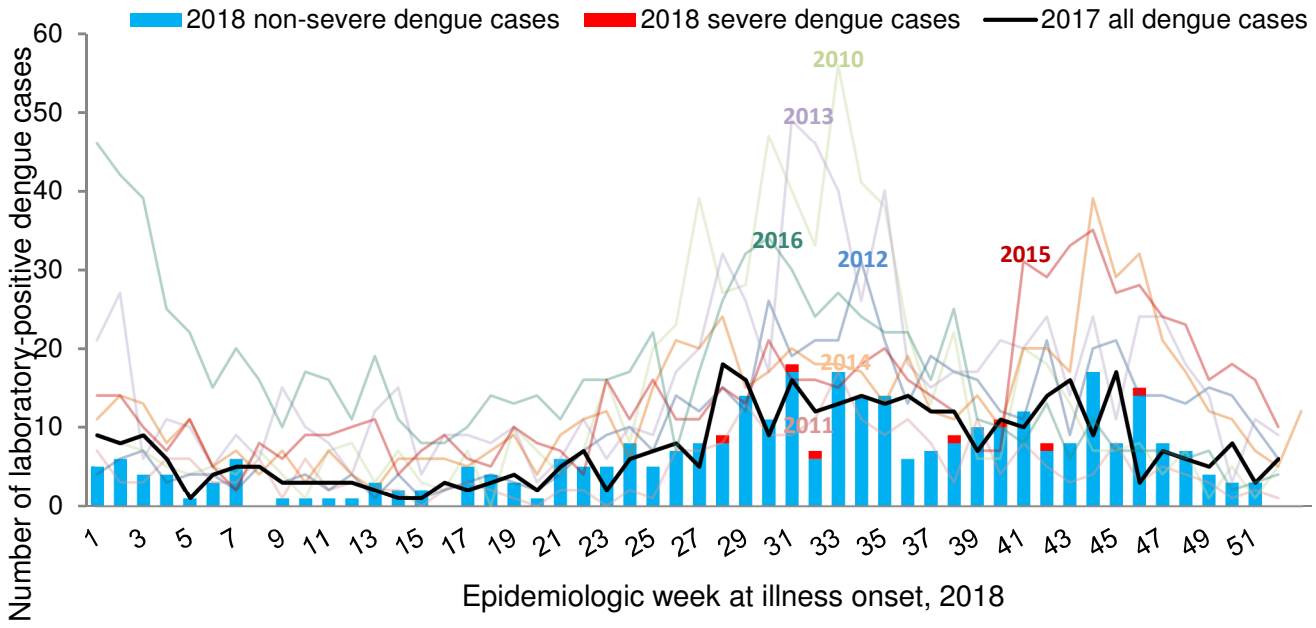
Table 2. Cumulative laboratory-positive travel-associated and locally-acquired dengue cases reported to ArboNET by state and disease severity — United States, 2018 (as of December 31, 2018).

State	2018			
	Dengue cases*		Severe dengue cases*	
	No.	%	No.	%
Total	485	100	7	100
Alabama	2	0	1	14
Alaska	2	0	0	0
American Samoa	150	31	0	0
Arizona	7	1	1	14
Arkansas	2	0	0	0
California	79	16	0	0
Colorado	9	2	0	0
Connecticut	2	0	0	0
Delaware	0	0	0	0
District of Columbia	2	0	0	0
Florida	50	10	3	43
Georgia	6	1	0	0
Guam	3	1	0	0
Hawaii	10	2	0	0
Idaho	0	0	0	0
Illinois	14	3	0	0
Indiana	1	0	0	0
Iowa	5	1	0	0
Kansas	2	0	0	0
Kentucky	2	0	0	0
Louisiana	2	0	0	0
Maine	2	0	0	0
Maryland	5	1	0	0
Massachusetts	2	0	0	0
Michigan	6	1	0	0
Minnesota	0	0	0	0
Mississippi	0	0	0	0
Missouri	1	0	0	0
Montana	0	0	0	0
Nebraska	1	0	0	0
Nevada	1	0	0	0
New Hampshire	1	0	0	0
New Jersey	20	4	0	0
New Mexico	1	0	0	0

New York	8	2	0	0
North Carolina	11	2	0	0
North Dakota	0	0	0	0
Northern Mariana Islands	0	0	0	0
Ohio	7	1	0	0
Oklahoma	0	0	0	0
Oregon	9	2	1	14
Pennsylvania	9	2	0	0
Puerto Rico	2	0	0	0
Rhode Island	0	0	0	0
South Carolina	3	1	0	0
South Dakota	1	0	0	0
Tennessee	6	1	0	0
Texas	18	4	0	0
U.S. Virgin Islands	0	0	0	0
Utah	2	0	0	0
Vermont	1	0	0	0
Virginia	8	2	0	0
Washington	6	1	0	0
West Virginia	1	0	0	0
Wisconsin	3	1	1	14
Wyoming	0	0	0	0

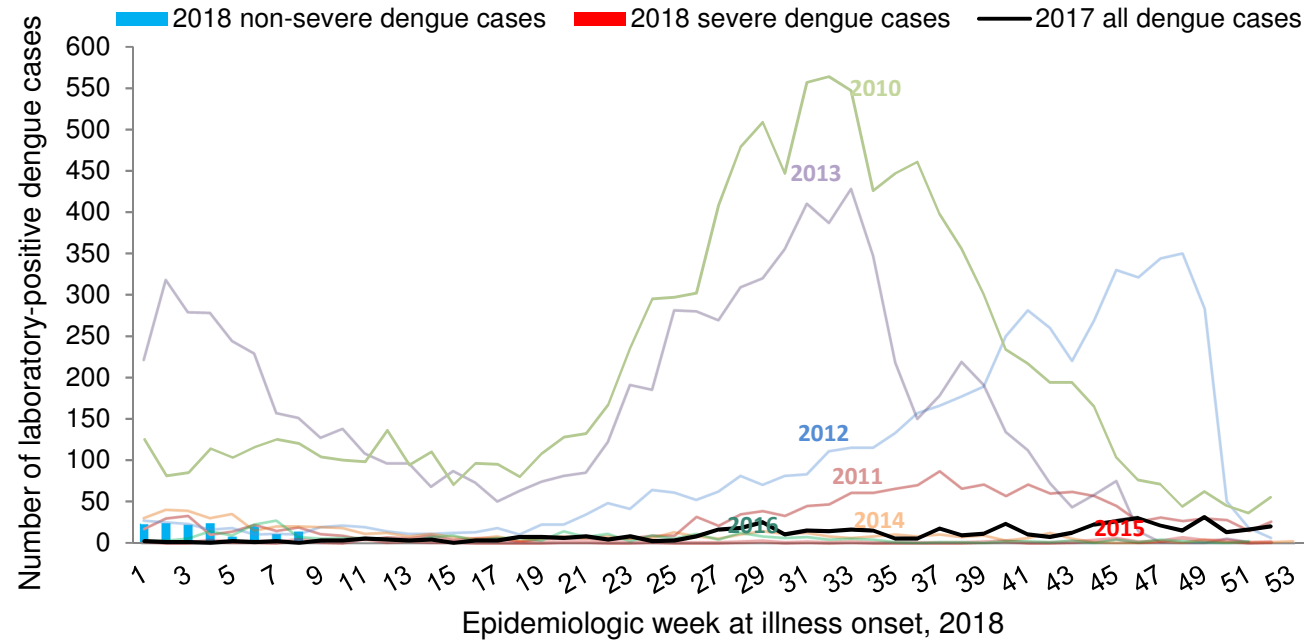
*Case definitions for dengue and severe dengue can be found online at:
http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/case-definition/2015/

Figure 2. Number of laboratory-positive travel-associated dengue cases from 50 US states by week of illness onset, 2018



* Bars refer to 2018 non-severe and severe travel-associated dengue cases from 50 US states by week of illness onset. In addition, current data (2018) is compared to previous years (i.e. 2010-2017) overall dengue cases which are depicted by lines.

Figure 3. Number of laboratory-positive travel-associated dengue cases from five US territories by week of illness onset, 2018



Additional resources

For additional dengue disease information and data, please visit the following websites:

- CDC's Dengue Branch:
  http://www.cdc.gov/dengue/

- National Notifiable Diseases Surveillance System
  http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/

- U.S. Virgin Islands Department of Health
  https://www.facebook.com/virginislandsDOH/

- Puerto Rico Department of Health
  http://www.salud.gov.pr/Estadisticas-Registros-y-Publicaciones/Informes%20Arbovirales/Reporte%20ArboV%20semana%2039-2018.pdf

From: Rivera, Aidsa (CDC/DDID/NCEZID/DVBD)
Sent: 12/19/2018 3:25:49 PM
To: Rivera, Aidsa (CDC/DDID/NCEZID/DVBD)
Cc:
Subject: Dengue--United States, 2018

attachments\B412FCD48A114254_DengueArboNET_Dec192018.pdf

Colleagues,

Attached please find the dengue surveillance report with provisional data reported to ArboNET as of Wednesday, December 19, 2018. Should you have any questions regarding the content of the report, please contact me, Aidsa Rivera (erj2@cdc.gov) from CDC Dengue Branch.

Please let me know if you have any questions or if you would like to be removed from this distribution list.

Regards,

Aidsa

Aidsa Rivera, MS
Epidemiologist/Surveillance Officer
Centers for Disease Control and Prevention, NCEZID, DVBD, Dengue Branch

CDC Dengue Branch
1324 calle Cañada
San Juan, PR 00920-3860
Office: (787) 706-2257
Fax: (787) 706-2496
E-mail:erj2@cdc.gov

Provisional data

Dengue activity – United States, 2018
Provisional data reported to ArboNET
Wednesday December 19, 2018

In 2010, dengue became a nationally reportable condition following approval by the Council of State and Territorial Epidemiologists, and case definitions were revised in 2015. ArboNET is a national electronic surveillance system for arboviral diseases in the U.S. administered by CDC. ArboNET was developed in response to the West Nile virus (WNV) epidemic in 1999 and non-WNV arboviral diseases were added to the system beginning in 2003.

Dengue cases have been reported to ArboNET since 2003. To better capture epidemiologic data on travel-associated cases, a dengue module was added in 2012. ArboNET data on reported dengue cases began to be disseminated to state health departments via weekly reports starting in August 2015.

In the United States, dengue presents in three epidemiologic settings:

- Endemic transmission – occurs in tropical areas where *Aedes* species mosquitoes are always present and dengue virus (DENV) transmission occurs throughout the year (e.g., Puerto Rico, Virgin Islands).
- Travel-associated cases – occurs in persons infected with a DENV while traveling to a dengue-endemic area of the world. Such cases are most often observed in regions of the U.S. where dengue is not endemic.
- Sporadic outbreaks – occurs in parts of the US where *Aedes sp.* mosquitoes exist, and are usually initiated from a returning traveler that is infected with the virus (e.g., Florida, US-Mexico border states).

The objectives of dengue reporting in ArboNET is to monitor disease epidemiology, provide timely information to public health official, and to monitor prevention efforts.

This update from the CDC Dengue Branch includes provisional data reported to ArboNET for **January 1 – December 19, 2018** for nationally notifiable dengue disease from 50 states and five territories. (Additional resources for dengue disease information and data are included on page 8). In some areas, **2010-2017** summarized data is also provided for the purposes of comparison.

From: Dannen, Brianna
Sent: 1/16/2019 9:50:57 AM
To: Combes, Jennifer L (DOH),Avelar, Adriana N (DOH),Brandstetter, Izzy,Debra Berliner (dberliner@kingcounty.gov),Fernandez, Columba (DOH),Kuss, Trang T (DOH),Lidbeck, Kari,Peterson, Lonnie (DOH),Wiltzius, Phillip (DOH)
Subject: RE: Immunization Review Team Meeting

I apologize, I had every intention of attending this meeting, but have been pulled into ICS for our measles incident, so will be unable to attend.
Thank you,
Brianna

From: Combes, Jennifer L (DOH) [Jennifer.Combes@doh.wa.gov]
Sent: Wednesday, January 16, 2019 9:47 AM
To: Avelar, Adriana N (DOH); Brandstetter, Izzy; Dannen, Brianna; Debra Berliner (dberliner@kingcounty.gov); Fernandez, Columba (DOH); Kuss, Trang T (DOH); Lidbeck, Kari; Peterson, Lonnie (DOH); Wiltzius, Phillip (DOH)
Cc: Mackenzie Melton
Subject: Immunization Review Team Meeting
When: Wednesday, January 16, 2019 10:00 AM-11:00 AM.
Where: Conference Call

Hello Review Team!
Below you will find the material that needs review as well as the call-in information. We only have one letter to review so this meeting should not take up the full allocated time. If you are unable to attend the meeting, please send in your edits by COB on 1/15/2019 in order for the group to review all sent-in edits live at the meeting. Additionally, if you have no edits and will not be in attendance for the meeting please respond back with "NO EDITS."

Thank you in advance!
DOH Staff: No room-please call in

January Immunization Review Meeting
Wed, Jan 16, 2019 10:00 AM - 11:30 AM PST

Please join my meeting from your computer, tablet or smartphone.
https://global.gotomeeting.com/join/745843133

You can also dial in using your phone.
United States: +1 (571) 317-3112

Access Code: 745-843-133

First GoToMeeting? Let's do a quick system check:
https://link.gotomeeting.com/system-check

From: Poel, Amy J (DOH)
Sent: 1/15/2019 4:10:03 PM
To: Carlson, Alyssa (DOHi),Halstenson, Gentle,Czapla, Monica,Riethman, Madison (DOHi)
Subject: CD Epi Measles contact

attachments\6C6F9FCB84E447B7_image010.png

attachments\A1D6FD820C034C52_image006.png

attachments\3780EDF699774AB9_image008.png

attachments\88E0800A0F4C4083_image002.png

attachments\569B81AD7EC048F1_image004.png

Hello all,

So that you will have excellent dedicated support here in CD Epi, Soyeon Lippman is going to take over for me as the person handling the DOH measles linelist, coordinating measles specimen testing, communicating measles lab testing results to you, and doing anything else you may need here from CD Epi. She will be performing these tasks M-R all day and Friday until noon. You can contact me after noon on Friday. You can reach her at the above e-mail or call her directly at 206-418-5590.

I will be handling all of the other VPD's (AFM, pertussis, diphtheria, tetanus, mumps, rubella, mening, h flu, varicella) and will be in the office and reachable through phone and email.

Amy

Amy J. Poel
Epidemiologist/Vaccine Preventable Disease Coordinator
Office of Communicable Disease Epidemiology
Division of Disease Control and Health Statistics
Washington State Department of Health
Amy.Poel@doh.wa.gov
206-418-5605 | www.doh.wa.gov
Fax 206-364-1060
Gender Pronouns: She/Her
<https://twitter.com/wadepthealth?lang=en>
<https://www.facebook.com/WADeptHealth/>
<https://www.instagram.com/wadepthealth/>
<https://www.youtube.com/channel/UCTSCpezTD0TjiiAOuJY7f5w/doh>
<https://medium.com/@WADeptHealth>

From: Graham, Julie A (DOH)
Sent: 1/16/2019 9:01:00 AM
To: Armstrong, Marissa
Subject: Ukrainian fact sheet

attachments\F92EAA713AB64BEA_Measles Basic Info_english (002).pub

attachments\6B8AEB90E2374153_Measles Basic Info_ukranian.pub

Here's a Ukrainian fact sheet about measles and vaccine. I'm attaching the English version so you can see what's on the Uk version too.
Please let me know if you need anything

From: Moysiuk, Sharon A (DOH)
Sent: Wednesday, January 16, 2019 8:50 AM
To: Graham, Julie A (DOH) <Julie.Graham@DOH.WA.GOV>
Subject:

From: Graham, Julie A (DOH)
Sent: 1/11/2019 12:16:00 PM
To:
Cc:
Subject: Heads up: Flu forecast & a favor

Happy Friday communicators!

Q. We need to identify which of these 2 Air Quality Indexes your LHJ uses? Can you please send an email response directly to Julie.fox@doh.wa.gov ?
* AQI ("Air Quality Index" from the EPA) or the,
* WAQA (Washington Air Quality Advisory from the Dept. of Ecology and DOH)?

FYI: The CDC did interviews today about their early assessment of how the flu season is & may go (the details are below). If you ever need info about how we're doing in WA, we publish a Weekly Flu Report every Friday afternoon. It has info like number of deaths, trends in cases, etc.

Have a great weekend.

From: Centers for Disease Control and Prevention (CDC) [mailto:cdc@service.govdelivery.com]
Sent: Friday, January 11, 2019 10:03 AM
To: Graham, Julie A (DOH) <Julie.Graham@DOH.WA.GOV>
Subject: FluSight: Flu Forecasting

FluSight: Flu Forecasting

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0MD

Influenza (Flu)

www.cdc.gov/flu

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0MD

2018 - 2019 Flu Season
January 11, 2019

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0MI

Weekly U.S. Influenza Surveillance Report
CDC's Influenza Division produces a weekly influenza surveillance report, FluView. According to this week's report (Dec 30-Jan 5), seasonal influenza activity remains elevated in the United States. New York City and 15 states experienced high influenza-like illness (ILI) activity.
Learn More

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0MI
season-updates-2018.htm>

Flu Season Ongoing with Tens of Thousands Hospitalized So Far
Today, CDC has estimated that so far during the 2018-19 flu season, between 6 million and 7 million people have been sick with flu, up to half of those people have sought medical care, and between 69,000 and 84,000 people have been hospitalized from flu. CDC will be providing weekly preliminary estimates of the cumulative in-season numbers of flu burden in the U.S. over the course of flu season.
Learn More

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0MI

FluSight: Flu Forecasting
Flu forecasting aims to predict future seasonal flu activity before it occurs, potentially reducing the impact of flu. CDC has developed the "FluSight", which displays the national, regional, and state-level forecasts on an interactive website. This season, CDC will be posting a short summary of the forecasts each week.
Learn More

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0M
Follow us on Twitter
#Flu can be much more dangerous than the common cold for some ppl, including young children. #Fluvaccine is the best protection against flu and its potentially severe complications. Get yourself and your child vaccinated today to help #fightflu!
https://go.usa.gov/xEbDN

Content source: National Center for Immunization and Respiratory Diseases

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0M

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0M
7/?s_cid=24-7_010>

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0M

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0M

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0M

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0M

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0M

<http://links.govdelivery.com/track?type=click&enid=ZWFzPTEmbWFpbGluZ2lkPTIwMTkwMTExLjk5OTc0M

800-CDC-INFO (800-232-4636)

From: Graham, Julie A (DOH)
Sent: 12/19/2018 2:36:00 PM
To:
Cc:
Subject: Head's Up - Embargoed report released tomorrow on Overdose in AIAN in WA

attachments\11139D212C5E4A73_image001.gif

attachments\B1E33A565E2D4EC8_image003.gif

attachments\1807BDAEAA874F8F_mm6750-H.pdf

attachments\2991F8A149AB478F_image004.gif

attachments\5F14E614EF884E57_image002.png

attachments\8E7BBBD35429455F_image005.png

Hi Public Health Communicators!
I just got this and thought it may draw media attention to local efforts & impacts. I'm not familiar with all the details, but your epis may be.

Please see attached article on overdose death in American Indian/Alaska Native Populations (AIAN) population in Washington from the NW Portland Area Indian Health Tribal Epi Center– embargoed until tomorrow. The report notes the increased rate of overdose, opioid-involved OD and heroin-involved OD among AIAN, as well as the misclassification of AIAN deaths (undercount using Death Certs only). Also of note – overdose among AIAN were higher in metropolitan (urban) counties*, and AIAN in WA have rates that are higher than AIAN in the US. Data are through 2015.

We can expect questions about:
* More recent data
* Services for AIAN population, especially urban AIAN

From: MMWR Media List [mailto:MMWR-MEDIA@LISTSERV.CDC.GOV] On Behalf Of Media@cdc.gov (CDC)
Sent: Wednesday, December 19, 2018 1:02 PM
To: MMWR-MEDIA@LISTSERV.CDC.GOV
Subject: MMWR Summary for December 21, 2018 *Embargoed until 1 pm EST Thursday, December 20 , 2018*

The MMWR is embargoed until 1 PM EST, Thursday, December 20, 2018

Press Contacts

December 21, 2018

Health Care, Family, and Community Factors Associated with Mental, Behavioral, and Developmental Disorders and Poverty Among Children Aged 2–8 Years — United States, 2016

CDC Media Relations
404-639-3286

Drug, Opioid-Involved, and Heroin-Involved Overdose Deaths in the American Indian/Alaska Native Populations — Washington, 1999–2015

Sujata Joshi
Epidemiologist
Office #: 503-416-3261
Cell #: 480-603-8619
Email: sjoshi@npaihb.org

Rabies in a Dog Imported from Egypt — Connecticut, 2017

CDC Media Relations
404-639-3286

Trends and Gaps in National Blood Transfusion Services — 14 Sub-Saharan African Countries, 2014–2016

CDC Media Relations
404-639-3286

Synopsis for December 21, 2018

Health Care, Family, and Community Factors Associated with Mental, Behavioral, and Developmental Disorders and Poverty Among Children Aged 2–8 Years — United States, 2016

Public assistance programs could offer a way for public health professionals and health

care providers to connect young children living in poverty to screening and treatment for mental, behavioral, or developmental disorders. A new CDC study reported that more children ages 2–8 years in lower-income households had been diagnosed with a mental, behavioral, or developmental disorder than children in higher-income households. This is consistent with previous research. Additionally, fewer children in lower-income households saw a health care provider in the previous year, compared with children in higher-income households. Among the children in lower-income households who did not see a health care provider in the previous year, 7 in 10 of these children received at least one public assistance benefit, such as Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Public health professionals and health care providers could use public assistance programs to connect families with young children to screening or services for mental, behavioral, or developmental disorders.
Link once embargo lifts:
https://www.cdc.gov/mmwr/volumes/67/wr/mm6750a1.htm?s_cid=mm6750a1_w

Drug, Opioid-Involved, and Heroin-Involved Overdose Deaths in the American Indian/Alaska Native Populations — Washington, 1999–2015

Misclassification of American Indians/Alaska Natives (AI/AN) in public health data can obscure the true burden of substance use disorders and other diseases in AI/AN communities, which in turn affects the ability of tribal, state, and federal programs to effectively respond to public health emergencies like the opioid epidemic. National data on the opioid epidemic may underestimate the true burden of overdose deaths in AI/AN communities. This study examined trends and disparities in drug and opioid-involved overdose deaths for AI/AN in Washington State, and also evaluated the effect of misclassification of AI/AN race on overdose mortality estimates. While AI/AN and whites in Washington had similar drug and opioid-involved overdose mortality rates during 1999–2001, AI/AN overdose rates have since increased at a faster rate, resulting in drug and opioid-involved overdose mortality rates that were 2.7 times higher than those of whites during 2013-2015. Washington death certificates that were not corrected for misclassification of AI/AN race underestimated AI/AN drug overdose mortality rates by approximately 40 percent.
Link once embargo lifts:
https://www.cdc.gov/mmwr/volumes/67/wr/mm6750a2.htm?s_cid=mm6750a2_w

Rabies in a Dog Imported from Egypt — Connecticut, 2017
The United States must remain vigilant at ports of entry, through its domestic surveillance infrastructure, and through dog vaccination coverage to avoid the reintroduction of canine rabies (dog rabies). Increasing education efforts among rescue organizations and their networks could strengthen efforts to keep dog rabies out of the United States. Rescuing animals abroad can be an act of love, but inappropriate animal rescue can expose you and your loved ones (including your animals) to a deadly threat. This report describes the sixth importation of a rabid dog into the United States in the past 15 years. Previous reports and publications have discussed the public health challenges and potential threats associated with the international movement of animals in commerce and the roles of federal, state, and local authorities. The United States has one of the most robust rabies surveillance and response networks in the world to promote the early detection of cases and to prevent rabies transmission.
Link once embargo lifts:
https://www.cdc.gov/mmwr/volumes/67/wr/mm6750a3.htm?s_cid=mm6750a3_w

Trends and Gaps in National Blood Transfusion Services — 14 Sub-Saharan African Countries, 2014–2016

An analysis of blood transfusion services in 14 sub-Saharan African countries reveals steady improvement in the access to safe and adequate blood supplies in seven countries from 2014 to 2016. To continue to improve blood safety programs, study authors recommend that countries consider sustained investments in continuous quality

improvement programs, accreditation, linking donors to testing and treatment services, and establishing reliable data systems. Despite steady improvement in blood transfusion services in 7 of the 14 countries analyzed, these countries have more work to do to reduce transfusion-transmissible infections and to link donors who test positive for HIV to treatment. In 2015, only a quarter of blood donors who tested positive for HIV were notified of their HIV results. In 2016, the percentage of all transfusion-transmissible infections in donated blood units remained high in many countries.
Link once embargo lifts:
https://www.cdc.gov/mmwr/volumes/67/wr/mm6750a4.htm?s_cid=mm6750a4_w

Notes from the Field:

* Notes from the Field: Infections After Receipt of Bacterially Contaminated Umbilical Cord Blood–Derived Stem Cell Products for Other Than Hematopoietic or Immunologic Reconstitution — United States, 2018
Link once embargo lifts:
https://www.cdc.gov/mmwr/volumes/67/wr/mm6750a5.htm?s_cid=mm6750a5_w

Quick Stats:
* QuickStats: Percentage of Emergency Department (ED) Visits for Pain at Which Opioids Were Given or Prescribed, by Patient Age and Year — National Hospital Ambulatory Medical Care Survey, 2005–2016
Link once embargo lifts:
https://www.cdc.gov/mmwr/volumes/67/wr/mm6750a6.htm?s_cid=mm6750a6_w

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U.S. Department of Health and Human Services

CDC works 24/7 protecting America’s health, safety, and security. Whether diseases start at home or abroad, are curable or preventable, chronic or acute, or from human activity or deliberate attack, CDC responds to America’s most pressing health threats. CDC is headquartered in Atlanta and has experts located throughout the United States and the world.
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_____
From: EPIXUpdate@cdc.gov
Sent: 12/27/2018 2:08:15 AM
To: D'Angeli, Marisa (DOH)
Cc:
Subject: Epi-X Today: Thursday, December 27, 2018

Epi-X reports posted in your areas of interest in the past 24 hours. To view a specific report, click on its URL.

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
~*~ Global Immunization News Report, December 21-26, 2018 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Friday through Wednesday, December 21-26, 2018.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=68012

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
FDA Enforcement Report -- United States, December 26, 2018
This report contains Class I, II, and III recalls of food and food products, drugs, biologics, and devices. The link to the full report is accessible through this posting.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=68010

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~
~*~ Media Tracking Report, December 26, 2018 ~*~
Media stories include rabies in Arizona; measles in multiple states and countries; pertussis in Indiana; AFM in multiple states; influenza in multiple states and Italy; hantavirus in Argentina; malaria in Nigeria and Trinidad & Tobago; yellow fever in South Sudan; cholera in Zimbabwe; and other media coverage.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=68011

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+1-770-488-7100 (If you cannot use the toll free number above, please call the CDC Emergency Operations Center and ask to speak to the Epi-X editor on call.)

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---

From: Rivera, Aidsa (CDC/DDID/NCEZID/DVBD)
Sent: 12/27/2018 7:43:20 AM
To: Rivera, Aidsa (CDC/DDID/NCEZID/DVBD)
Cc:
Subject: Dengue -- United States, 2018

attachments\A2F173F64B03434D_DengueArboNET_Dec262018.pdf

Colleagues,

Attached please find the dengue surveillance report with provisional data reported to ArboNET as of Wednesday, December 26, 2018. Should you have any questions regarding the content of the report, please contact me, Aidsa Rivera (erj2@cdc.gov) from CDC Dengue Branch.

Please let me know if you have any questions or if you would like to be removed from this distribution list.

Regards,

Aidsa

Aidsa Rivera, MS
Epidemiologist/Surveillance Officer
Centers for Disease Control and Prevention, NCEZID, DVBD, Dengue Branch

CDC Dengue Branch
1324 calle Cañada
San Juan, PR 00920-3860
Office: (787) 706-2257
Fax: (787) 706-2496
E-mail:erj2@cdc.gov

Provisional data

Dengue activity – United States, 2018
Provisional data reported to ArboNET
Wednesday December 26, 2018

In 2010, dengue became a nationally reportable condition following approval by the Council of State and Territorial Epidemiologists, and case definitions were revised in 2015. ArboNET is a national electronic surveillance system for arboviral diseases in the U.S. administered by CDC. ArboNET was developed in response to the West Nile virus (WNV) epidemic in 1999 and non-WNV arboviral diseases were added to the system beginning in 2003.

Dengue cases have been reported to ArboNET since 2003. To better capture epidemiologic data on travel-associated cases, a dengue module was added in 2012. ArboNET data on reported dengue cases began to be disseminated to state health departments via weekly reports starting in August 2015.

In the United States, dengue presents in three epidemiologic settings:

- Endemic transmission – occurs in tropical areas where *Aedes* species mosquitoes are always present and dengue virus (DENV) transmission occurs throughout the year (e.g., Puerto Rico, Virgin Islands).
- Travel-associated cases – occurs in persons infected with a DENV while traveling to a dengue-endemic area of the world. Such cases are most often observed in regions of the U.S. where dengue is not endemic.
- Sporadic outbreaks – occurs in parts of the US where *Aedes sp.* mosquitoes exist, and are usually initiated from a returning traveler that is infected with the virus (e.g., Florida, US-Mexico border states).

The objectives of dengue reporting in ArboNET is to monitor disease epidemiology, provide timely information to public health official, and to monitor prevention efforts.

This update from the CDC Dengue Branch includes provisional data reported to ArboNET for **January 1 – December 26, 2018** for nationally notifiable dengue disease from 50 states and five territories. (Additional resources for dengue disease information and data are included on page 8). In some areas, **2010-2017** summarized data is also provided for the purposes of comparison.

From: Gastanaduy, Paul A. (CDC/DDID/NCIRD/DVD)
Sent: 1/14/2019 11:17:42 AM
To: DeBolt, Chas (DOH)
Cc:
Subject: MMR and school exemptions

Hi Chas,

I wanted to follow-up on these analyses. As you know, Minnesota is doing a similar evaluation and they are asking if you would be interested in submitting something together with them. Either way is fine, I guess it would depend on where things stands.

Very best,

Paul.

From: DeBolt, Chas (DOH) <Chas.DeBolt@DOH.WA.GOV>
Sent: Thursday, July 26, 2018 1:33 PM
To: Gastanaduy, Paul A. (CDC/OID/NCIRD) <vid7@cdc.gov>; Le, Nhan (DOH) <nhan.le@doh.wa.gov>
Cc: Patel, Manisha M. (CDC/OID/NCIRD) <dvn4@cdc.gov>
Subject: RE: MMR Abstract for NIC - deadline at midnight New Years Eve

Great! Thanks.
Chas

From: Gastanaduy, Paul A. (CDC/OID/NCIRD) [mailto:vid7@cdc.gov]
Sent: Thursday, July 26, 2018 10:19 AM
To: DeBolt, Chas (DOH) <Chas.DeBolt@DOH.WA.GOV>; Le, Nhan (DOH) <nhan.le@doh.wa.gov>
Cc: Patel, Manisha M. (CDC/OID/NCIRD) <dvn4@cdc.gov>
Subject: RE: MMR Abstract for NIC - deadline at midnight New Years Eve

We can wait to discuss once you have the rest of the data and he has taken a look.

From: DeBolt, Chas (DOH) <Chas.DeBolt@DOH.WA.GOV>
Sent: Thursday, July 26, 2018 1:17 PM
To: Gastanaduy, Paul A. (CDC/OID/NCIRD) <vid7@cdc.gov>; Le, Nhan (DOH) <nhan.le@doh.wa.gov>
Cc: Patel, Manisha M. (CDC/OID/NCIRD) <dvn4@cdc.gov>
Subject: RE: MMR Abstract for NIC - deadline at midnight New Years Eve

Hi Paul,
Did you still want to touch base soon, or do you want to wait till Nhan has some preliminary analysis done to discuss?
Thanks,
Chas

From: Gastanaduy, Paul A. (CDC/OID/NCIRD) [mailto:vid7@cdc.gov]
Sent: Thursday, July 26, 2018 8:48 AM
To: Le, Nhan (DOH) <nhan.le@doh.wa.gov>; DeBolt, Chas (DOH) <Chas.DeBolt@DOH.WA.GOV>
Cc: Patel, Manisha M. (CDC/OID/NCIRD) <dvn4@cdc.gov>
Subject: RE: MMR Abstract for NIC - deadline at midnight New Years Eve

That sounds like a great plan, Nhan, and happy you are making progress. Just keep me

posted once you have taken a look at the new data.

Best,

Paul.

From: Le, Nhan (DOH) <nhan.le@doh.wa.gov>
Sent: Thursday, July 26, 2018 11:38 AM
To: Gastanaduy, Paul A. (CDC/OID/NCIRD) <vid7@cdc.gov>; DeBolt, Chas (DOH) <Chas.DeBolt@DOH.WA.GOV>
Cc: Patel, Manisha M. (CDC/OID/NCIRD) <dvn4@cdc.gov>
Subject: RE: MMR Abstract for NIC - deadline at midnight New Years Eve

Hi Paul,

We are currently in the process of compiling the school data for the 2017-2018 school year and hope to have it ready soon. I have updated my analysis code to add the changes we had discussed at the conference - adding a chi squared test and including individuals with no IIS data. Once we data is compiled, I hope to be able to run the code quickly and will have an updated analysis to review. If you have any questions or other suggestions please let me know.

Nhan

From: Gastanaduy, Paul A. (CDC/OID/NCIRD) [mailto:vid7@cdc.gov]
Sent: Thursday, July 26, 2018 6:57 AM
To: DeBolt, Chas (DOH) <Chas.DeBolt@DOH.WA.GOV>
Cc: Patel, Manisha M. (CDC/OID/NCIRD) <dvn4@cdc.gov>; Le, Nhan (DOH) <nhan.le@doh.wa.gov>
Subject: RE: MMR Abstract for NIC - deadline at midnight New Years Eve

Hi Chas and Nhan,

Hope you are doing well. I was wondering if we could touch base about these analyses. Last time we discussed was at the conference I believe.

Very best,

Paul.

_____
From: EPIXUpdate@cdc.gov
Sent: 1/1/2019 2:03:31 AM
To: D'Angeli, Marisa (DOH)
Cc:
Subject: Epi-X Today: Tuesday, January 1, 2019

Epi-X reports posted in your areas of interest in the past 24 hours. To view a specific report, click on its URL.

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
~*~ Global Immunization News Report, December 28, 2018 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Friday, December 28, 2018.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69066

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~
~*~ Media Tracking Report, December 31, 2018 ~*~
Media stories include opioid use in multiple states; pertussis in California; measles in Florida and New Jersey; hepatitis A and acute flaccid myelitis in multiple states; Legionnaires' in Michigan; dengue in Jamaica; RB51 in New York; and other media coverage.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69065

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---

From: Poel, Amy J (DOH)
Sent: 1/14/2019 4:24:15 PM
To: Czapla, Monica,Lindquist, Scott W (DOH),juventila.liko@state.or.us,Lang, Misty M (DOH),DeBolt, Chas (DOH),Halstenson, Gentle,Carlson, Alyssa (DOHi)
Cc:
Subject: GoTo Meeting Clark County Measles 4:30pm

attachments\7CE4A1BEA94C4B4A_image001.png

Hello all,

So multiple people can call in, I've set up a GoTo meeting for 4:30pm. Info below:

Clark Co Measles Touch Base
Mon, Jan 14, 2019 4:30 PM - 5:30 PM PST

Please join my meeting from your computer, tablet or smartphone.
https://global.gotomeeting.com/join/436957541

You can also dial in using your phone.
United States: +1 (646) 749-3122

Access Code: 436-957-541

Joining from a video-conferencing room or system?
Dial: 67.217.95.2##436957541
Cisco devices: 436957541@67.217.95.2

First GoToMeeting? Let's do a quick system check:
https://link.gotomeeting.com/system-check

Leslie Byerly
Office Manager
Communicable Disease Epidemiology
Division of Disease Control and Health Statistics
Washington State Department of Health
leslie.byerly@doh.wa.gov
206-418-5505 | www.doh.wa.gov
206-418-5500 | Fax- 206-364-1060
Gender Pronouns: she/her
<https://www.doh.wa.gov/Newsroom/SocialMedia>

From: Crawford Courtney
Sent: 1/16/2019 4:54:57 PM
To: Czapla, Monica,DeBolt, Chas (DOH)
Subject: RE: Additional Measles Contact List Request


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attachments\26C38EF766EA4473_image003.jpg


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Thanks so much, Monica!

Here's the link to the Contact Investigation video I mentioned in case in might come in handy on your end. We just sent it out to all our counties today as well.

https://www.youtube.com/watch?v=cf7m32pgsMI

--
Courtney

From: Czapla, Monica <Monica.Czapla@clark.wa.gov>
Sent: Wednesday, January 16, 2019 4:53 PM
To: Crawford Courtney <COURTNEY.CRAWFORD@dhsoha.state.or.us>; Chas DeBolt (Chas.DeBolt@DOH.WA.gov) <Chas.DeBolt@DOH.WA.gov>
Cc: Lisa Ferguson <lisa.ferguson@multco.us>; asummer@clackamas.us; amy_manchester_harris@co.washington.or.us
Subject: RE: Additional Measles Contact List Request

Courtney – Chas will be in touch about contact sharing soon.

<https://urldefense.proofpoint.com/v2/url?u=https-3A__www.clark.wa.gov_&d=DwMFAg&c=7gilq_oJKU2hnacFUWFTuYqjMQ111TRstgx6WoATdXo&r=bVUVehk
M3WUM3bTnlOfgelkGElSG91vttdnxw0x-dbmJ0RhUV&m=D0Nq-6w0gm8P6yMnCcqt5F1OKmt0uDdXmXBWVkUInVs&s=8Ug0gQd_u5XUrlA6O-3YsdIJOQPWEX-tYlDfrSDK_mY&e=>

Monica Czapla, MPH
Program Manager - Infectious Diseases
PUBLIC HEALTH

564.397.8002 (note: our office area code has changed)
360.836.9086 cell

<https://urldefense.proofpoint.com/v2/url?u=https-3A__www.facebook.com_pages_Clark-2DCounty-2DWA_160194497399185&d=DwMFAg&c=7gilq_oJKU2hnacFUWFTuYqjMQ111TRstgx6WoATdXo&r=bVUVe
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M3WUM3bTnlOfgelkGElSG91vttdnxw0x-dbmJ0RhUV&m=D0Nq-6w0gm8P6yMnCcqt5F1OKmt0uDdXmXBWVkUInVs&s=QhEuU0gTrVKUItoj-Tk2bwOTZAOzrPT9rEgsw03X7Vc&e=>

<https://urldefense.proofpoint.com/v2/url?u=https-3A__www.youtube.com_user_ClarkCoWa_&d=DwMFAg&c=7gilq_oJKU2hnacFUWFTuYqjMQ111TRstgx6WoA M3WUM3bTnlOfgelkGElSG91vttdnxw0x-dbmJ0RhUV&m=D0Nq-6w0gm8P6yMnCcqt5F1OKmt0uDdXmXBWVkUInVs&s=chv5BMma7G7mXG3wtIrh4nQPFjlGDYJLCD1jlD81LS(

From: Crawford Courtney [mailto:COURTNEY.CRAWFORD@dhsoha.state.or.us]
Sent: Wednesday, January 16, 2019 11:28 AM
To: Czapla, Monica
Cc: Lisa Ferguson; asummer@clackamas.us; amy_manchester_harris@co.washington.or.us
Subject: Additional Measles Contact List Request

Monica,

Sorry for the second email in five minutes—we would also like your Case ID included for the case the exposure is related to for tracking purposes on our end.

Thanks so much!

--

Courtney Crawford, MPH
Viral Pathogens Epidemiologist
Public Health Division
Courtney.crawford@state.or.us
971-673-1075

From: Podczervinski, Sara T (DOH)
Sent: 12/27/2018 4:30:45 PM
To: Abbott, Amy (DSHS/ALTSA/RCS),Angela Dickson ,Bevers, Elyse K (DOH),Catherine Kroll,Chris Kobus,Dana Nguyen,D'Angeli, Marisa (DOH),Dellit, Timothy,E. Patchen Dillinger,Gordon, Elizabeth (DOH),Ethan Crawford,Fran Petersen,Giana Davidson,Greg Matsuura,Corbridge, Ian (DOHi),Jamie Moran,Jeanette Harris,Jessica Symank,John Lynch,Joseph Arceno,Karie Turnage-Fugate (katurnage@comcast.net),Kauber, Kelly J (DOH),Kim Kummer ,Kunkel, Danielle L (DOH),Kvak, Staci L (DOH),Lauara Staubitz,Lewis, Larissa C (DOH),Lianne Delaney,Locke, Tom,Lucia Austin-Gil,Maceachern, Dorothy (DOHi),Mike Hori,Montgomery, Patricia A (DOH),Neil Barg,Petersen, Fran,Podczervinski, Sara T (DOH),Preston, Gary,Preston, Gary,Preston, Gary,Raymond Belarmino,Rosalind Ball,Sabrina Hill,Sandra Assasnik,Schneider, Emily C (DOH),Sullivan, Laurie,Beryl Knauth,Tara Lee Dockery 2,Therese Mirisola,Tyson, Nancy L (DOH),uw,Whittington, Nancy,Yanling Yu,Zimmerman, Matthew S (DOH),Sandra Assasnik
Cc:
Subject: [HAI Advisory Committee] Meeting Schedule

attachments\5A67DD4F6DE14D8A_Mircobiological Diagnosis_Cool Gadgets webinar.pdf

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attachments\ADDCA36983904D00_image013.png

attachments\D15FE66D55E84E08_ICAR Flyer Dental.pdf

Hello HAI Advisory Committee,

I hope everyone had a fun and restful holiday with family and friends.

The last time I wrote, it was to inform you that our HAI colleagues at the Centers for Disease Control and Prevention (CDC) would be coming to Seattle for our in-person HAI Advisory Committee in January. The CDC had a slight schedule change. Our joint HAI Advisory Committee/CDC meeting will be delayed until early spring, most likely March. I think this schedule change is for the best, since it'll be post-winter weather and viaduct closure.

Our last meeting was in September so we are overdue for a meeting. Here is the meeting schedule for the next few months:

Date Time Type Meeting Meeting Topics Mon, January 14 1:00-2:30 Webinar*

* Dental Infection Control Assessments (see attachment)

* Antimicrobial Resistance Updates: carbapenem-resistant Enterobacteriaceae (CRE) surveillance, multidrug-resistant organism response toolkit, Candida auris.

* Drug Diversion in Healthcare – Challenges of reporting suspect/confirmed diversion

* Future HAI reports and use of Tableau to display data March (day TBD) ½ day In-person in Kent HAI Discussion with CDC Mon, March 11 1:00-2:30 Webinar* I'll keep this meeting on the schedule, but will cancel

if the CDC meeting happens in March. Mon, May 13 1:00-2:30 Webinar*
2019 HAI Report to Legislature - Planning
Other topics TBD
To submit agenda item requests: sara.podczervinski@doh.wa.gov *Webinar Call-In Info (same for all webinar meetings): Step 1: https://global.gotomeeting.com/join/702587397 Step 2: Call +1 (872) 240-3212 and enter access code 702-587-397

Here are a few infection prevention resources/events I thought you would find interesting:
* Patient Colonization: Implications and Possible Solutions for Contamination of the Healthcare Environment - https://www.infectioncontroltoday.com/transmission-prevention/patient-colonization-implications-and-possible-solutions-contamination
* January 10th from 10-11:30: The Northwest Healthcare Response Network is hosting a webinar featuring Dr. Jacky Chow of MultiCare Health System, and Dr. Scott Lindquist from the Washington State Department of Health on "Microbiological Diagnosis: Cool Gadgets are just getting Better!" The flyer is attached. Registration Link: https://zoom.us/webinar/register/WN_jVK3m50yRFWUy2_pZUeTIw
* CDC and the Joint Commission released new infection control resources for podiatry and orthopedic and pain management settings. These free online resources are part of ADOPT (Adaption and Dissemination of Outpatient Infection Prevention), a three-year initiative that began in 2015 to adapt and enhance CDC guidance related to infection prevention and control in outpatient settings: https://www.cdc.gov/infectioncontrol/tools/index.html
* Council for Outbreak Response Healthcare-Associated Infections and Antimicrobial Resistance (CORHA) works to improve practices and policies at the local, state and national levels for the detection, investigation, control and prevention of outbreaks across the healthcare continuum: https://corha.org/
* Online audiocasts from the Society for Healthcare Epidemiology of America (SHEA) and CDC Outbreak Response Training Program: https://shea.med-iq.com/online-audiocasts-from-the-sheacdc-ortp-regional-training-workshop.html
* Updated central line associated bloodstream infection (CLABSI) and Clostridioides difficile infection (CDI) reports for Washington State hospitals: https://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/HealthcareAssociatedInfections/HAIReports

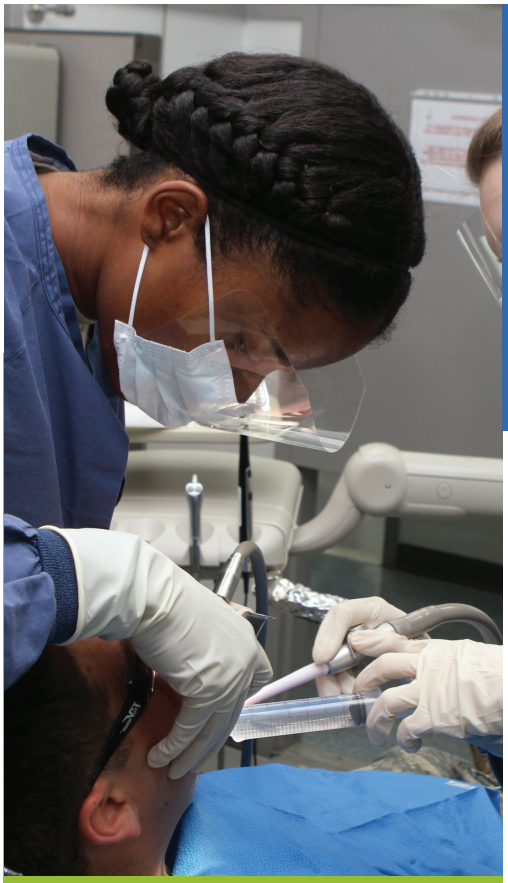
* Slides from the joint Puget Sound Association for Professionals in Infection Control and Epidemiology (APIC) and Department of Health conference on injection drug diversion in healthcare that took place in November 2018: https://drive.google.com/drive/folders/1sVtc31HfPx44BVgCOt6xCwut7jRGN9Tg?usp=sharing

Thanks for your patience as we figure out the scheduling for our in-person meeting with CDC in March. I look forward to our webinar meeting on Monday, January 14 from 1-2:30. If you have any agenda item requests or would like to share successes and/or challenges you have had on recent HAI projects, contact me and I would be happy to add you to the agenda.

Happy New Year!
Sara

Sara Podczervinski, RN, MPH, CIC, FAPIC
Healthcare-Associated Infections and Antimicrobial Resistance Program Manager
Office of Communicable Disease Epidemiology
Disease Control and Health Statistics
Washington State Department of Health
sara.podczervinski@doh.wa.gov
206-418-5519 | www.doh.wa.gov
<https://twitter.com/wadepthealth?lang=en>
<https://www.facebook.com/WADeptHealth/>

<https://www.instagram.com/wadepthealth/>
<https://www.youtube.com/channel/UCTSCpezTD0TjiiAOuJY7f5w/doh>
<https://medium.com/@WADeptHealth>



Infection Control Assessment and Response (ICAR)

ICAR uses a consultative and collaborative approach to assess the strength of infection prevention in healthcare, so that public health can create tools to improve existing capability.

Public Health + Healthcare = ICAR

Spokane Regional Health District, Clark County Public Health and the Washington State Department of Health are partnering on an exciting new initiative aimed at assessing infection prevention in dental clinics in Washington.

Consults for Dental Centers

Public health experts will meet with interested dental clinics and conduct a comprehensive infection prevention assessment using evidence-based tools from the Centers for Disease Control and Prevention (CDC). Visits are consultative and provided at no cost. Any dental clinic in Washington can participate in this voluntary program.

Going Back to Basics

The tool will be sent to the participating facility ahead of time. Topics covered during the visit will range from hand hygiene to antimicrobial stewardship. Visits will last approximately 1/2 day and may involve observations of staff performing hand hygiene or sterilization practices.

Relationship Building

Public health will make these visits simple and valuable. Assessing overall infection prevention throughout Washington will no doubt result in a stronger healthcare system.

To schedule your ICAR assessment, contact:

Dorothy MacEachern, MS, MPH, CIC
509.324.1569
dmaceachern@srhd.org
(Eastern Washington)

Dana C. Nguyen BSN, RN, CIC
dana.nguyen@clark.wa.gov
564.397.2000 ext. 7272
(Southwest Washington)

Patty Montgomery MPH, RN, CIC
Patricia.montgomery@doh.wa.gov
206.418.5558
(Puget Sound Region)

December 2018

_____
From: Blanton, Lenee (CDC/DDID/NCIRD/ID)
Sent: 1/11/2019 8:00:33 AM
To:
Cc:
Subject: CDC/Influenza Division Weekly Influenza Surveillance Report (Week 1)

attachments\1CF6D89879D644BA_1901 CDC FluView Jan 5 2019.pdf

Attached is the CDC/Influenza Division Weekly Influenza Surveillance Report (FluView) for week 1, ending January 5, 2019.

Please let me know if you have any questions.

Thanks,
Lenee Blanton
Epidemiology and Prevention Branch
Influenza Division
Centers for Disease Control and Prevention

From: Czapla, Monica
Sent: 1/16/2019 4:53:28 PM
To: 'Crawford Courtney',DeBolt, Chas (DOH)
Subject: RE: Additional Measles Contact List Request


attachments\0032156E7974494B_image004.jpg


attachments\73D1E162413A4459_image008.jpg


attachments\05B8AA93B1EB4782_image002.jpg


attachments\D6C49C06D0964E13_image006.jpg

Courtney – Chas will be in touch about contact sharing soon.

<https://www.clark.wa.gov/>

Monica Czapla, MPH
Program Manager - Infectious Diseases
PUBLIC HEALTH

564.397.8002 (note: our office area code has changed)
360.836.9086 cell

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<https://twitter.com/ClarkCoWA> <https://www.youtube.com/user/ClarkCoWa/>

From: Crawford Courtney [mailto:COURTNEY.CRAWFORD@dhsoha.state.or.us]
Sent: Wednesday, January 16, 2019 11:28 AM
To: Czapla, Monica
Cc: Lisa Ferguson; asummer@clackamas.us;
amy_manchester_harris@co.washington.or.us
Subject: Additional Measles Contact List Request

Monica,

Sorry for the second email in five minutes—we would also like your Case ID included for the case the exposure is related to for tracking purposes on our end.

Thanks so much!

--

Courtney Crawford, MPH
Viral Pathogens Epidemiologist
Public Health Division
Courtney.crawford@state.or.us
971-673-1075

From: Carlson, Alyssa
Sent: 1/16/2019 2:57:00 PM
To: Millet, Meghan,McCarthy, Shannon,Riethman, Madison (DOHi)
Subject: HCF Exposure Line List template


attachments\FB16E280E5BB4CEA_image006.jpg


attachments\64045634B7B44B2C_image004.jpg


attachments\9B7FA9F60FA34BC0_image002.jpg


attachments\0F2082349AC5484C_image008.jpg

Hi Team,

Here is a healthcare facility exposure line list to send to providers for them to fill out.

H:\COMMUNICABLE DISEASES\CD\Disease Specific Resources\Measles\Data Management\Measles HCF Exposure Line List.xlsx

Thanks,

<https://www.clark.wa.gov/>

Alyssa Carlson, MPH
Epidemiologist
COMMUNICABLE DISEASE

564.397.8020

<https://www.facebook.com/pages/Clark-County-WA/1601944973399185>
<https://twitter.com/ClarkCoWA> <https://www.youtube.com/user/ClarkCoWa/>

From: Carlson, Alyssa
Sent: 1/9/2019 9:09:23 AM
To: DeBolt, Chas (DOH)
Cc:
Subject: Circle of Caring Friends Charity contact

attachments\C5603D515CA84A8C_image009.jpg

attachments\0B0FF77D146B4795_image010.jpg

attachments\D4E435F2C5BC4547_image012.jpg

attachments\16989933C0564275_image011.jpg

Hi Chas,

We've received a name and number for a point of contact with the Circle of Caring Friends Charity. They are the group that coordinated our confirmed measles case's travel to WA.

The CCF contact is Luba at 253 632-2543.

I also found the group on Facebook if you're interested
https://m.facebook.com/CircleOfCaringFriendsCharity/

Thanks,
Alyssa

<https://www.clark.wa.gov/>

Alyssa Carlson, MPH
Epidemiologist
COMMUNICABLE DISEASE

564.397.8020

<https://www.facebook.com/pages/Clark-County-WA/1601944973399185>
<https://twitter.com/ClarkCoWA> <https://www.youtube.com/user/ClarkCoWa/>

From: Graham, Julie A (DOH)
Sent: 1/15/2019 5:27:00 PM
To:
Cc:
Subject: 01-15-2019 Gov Alert Measles outbreak

attachments\CE918878DEC84198_01-15-2019 Gov Alert Measles outbreak.docx

attachments\CA29F9E3C83D42BA_image001.png

Good evening,
Attached is an alert about an expanding measles outbreak in Clark County.
Please let me know if you have any questions,

Thank you,

Julie Graham
Gender Pronouns: her/she
Public Information Officer
Center for Public Affairs
Washington State Department of Health
julie.graham@doh.wa.gov
360-810-1628 | www.doh.wa.gov
<https://www.doh.wa.gov/Newsroom/SocialMedia>

_____
From: EPIXUpdate@cdc.gov
Sent: 12/20/2018 2:09:52 AM
To: Gautom, Romesh (DOH)
Cc:
Subject: Epi-X Today: Thursday, December 20, 2018

Epi-X reports posted in your areas of interest in the past 24 hours. To view a specific report, click on its URL.

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
~*~ Global Immunization News Report, December 18, 2018 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Tuesday, December 18, 2018.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=67961

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
FDA Enforcement Report -- United States, December 19, 2018
This report contains Class I, II, and III recalls of food and food products, drugs, biologics, and devices. The link to the full report is accessible through this posting.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=67959

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~
~*~ Media Tracking Report, December 19, 2018 ~*~
Media stories include hepatitis A in Arizona, Louisiana, and New Mexico; influenza in multiple states and countries; acute flaccid myelitis in Michigan; prion disease in Tennessee; legionellosis in Wisconsin; Lassa fever in Benin; Ebola in DRC; measles in Brazil and Israel; and other media coverage.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=67960

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+1-770-488-7100 (If you cannot use the toll free number above, please call the CDC Emergency Operations Center and ask to speak to the Epi-X editor on call.)

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---

From: Carlson, Alyssa
Sent: 1/16/2019 10:37:26 AM
To: DeBolt, Chas (DOH)
Cc:
Subject: measles epi curve


attachments\AC91EDD0E4D043E9_image006.jpg


attachments\15EAFA90E1334A1C_image004.jpg


attachments\00D29788686C4E7B_image002.jpg


attachments\6D46A0092A484616_image008.jpg

Reply here :-)

Thank you,

<https://www.clark.wa.gov/>

Alyssa Carlson, MPH
Epidemiologist
COMMUNICABLE DISEASE

564.397.8020

<https://www.facebook.com/pages/Clark-County-WA/1601944973399185>
<https://twitter.com/ClarkCoWA> <https://www.youtube.com/user/ClarkCoWa/>

From: Acosta, Anna (CDC/DDID/NCIRD/DBD)
Sent: 1/11/2019 11:19:14 AM
To: Winter, Kathleen@CDPH,Winter, Kathleen,Albanese, Bernadette (CDC tchd.org),Moore, Zackary (CDC dhhs.nc.gov),Sullivan, Susan,Victor.Cruz@state.mn.us,Kenyon, Cynthia (MDH) (Cynthia.Kenyon@state.mn.us),DeBolt, Chas (DOH),meghan.barnes@state.co.us,LIKO Juventila,Albertson, Justin,Herlihy, Rachel (CDC state.co.us),Schauer, Stephanie L - DHS,Moyer, Stacey C - DHS,Komatsu, Kenneth (CDC azdhs.gov),Susan Robinson,Patsy.Kelso@vermont.gov,Nicolai, Laura Ann (CDC vermont.gov),Susan Lett,Cieslak, Paul (CDC dhsoha.state.or.us),Fleming, Stephen (DPH),Laura Erhart,Burns, Meagan (DPH),Johnson, Hillary (DPH),Klemp, Abby S - DHS,Tondella, Maria L. (CDC/DDID/NCIRD/DBD),Williams, Margaret (CDC/DDID/NCIRD/DBD),Roush, Sandra (CDC/DDID/NCIRD/OD),Skoff, Tami Hilger (CDC/DDID/NCIRD/DBD),Pawloski, Lucia (CDC/DDID/NCIRD/DBD),Harriman, Kathleen@CDPH,Leos,Greg (DSHS),Brady, Shane (CDC azdhs.gov),Sanders, Jeffrey (MDH),Hahn, Christine
Cc:
Subject: RE: CSTE pertussis case definition change

attachments\C21B4ED1A1ED49E5_Pertussis Diagnosis Guidance_Jan2019_v1.docx

attachments\72998CF120434F26_Pertussis Diagnosis Algorithm_6.pptx

Hi everyone,

I have attached an updated version of the guidance for pertussis diagnostics, which we last discussed some time ago. There is word document, and a powerpoint which has three different options for a graphic to be included in the guidance. For our discussion next week, it would be great to have your feedback on the text and which graphic you like best (or let us know if you have different ideas for a graphic).

I look forward to talking soon, and have a great weekend - Anna

Anna Acosta, MD
NCIRD/DBD/MVPDB
Office: 404-639-1951
Fax: 404-679-5072
AMAcosta@cdc.gov

-----Original Appointment-----
From: Acosta, Anna (CDC/DDID/NCIRD/DBD)
Sent: Monday, January 7, 2019 12:55 PM
To: Acosta, Anna (CDC/DDID/NCIRD/DBD); Winter, Kathleen@CDPH; Winter, Kathleen; Albanese, Bernadette (CDC tchd.org); Moore, Zackary (CDC dhhs.nc.gov); Sullivan, Susan; Victor.Cruz@state.mn.us; Kenyon, Cynthia (MDH) (Cynthia.Kenyon@state.mn.us); DeBolt, Chas; meghan.barnes@state.co.us; LIKO Juventila; Albertson, Justin; Herlihy, Rachel (CDC state.co.us); Schauer, Stephanie L - DHS; Moyer, Stacey C - DHS; Komatsu, Kenneth (CDC azdhs.gov); Susan Robinson; Patsy.Kelso@vermont.gov; Nicolai, Laura Ann (CDC vermont.gov); Susan Lett; Cieslak, Paul (CDC dhsoha.state.or.us); Fleming, Stephen (DPH); Laura Erhart; Burns, Meagan (DPH); Johnson, Hillary (DPH); Klemp, Abby S - DHS; Tondella, Maria L. (CDC/DDID/NCIRD/DBD); Williams, Margaret (CDC/DDID/NCIRD/DBD); Roush, Sandra (CDC/DDID/NCIRD/OD); Skoff, Tami Hilger (CDC/DDID/NCIRD/DBD); Pawloski, Lucia (CDC/DDID/NCIRD/DBD); Harriman, Kathleen@CDPH; Leos,Greg (DSHS); Brady, Shane (CDC azdhs.gov); Sanders, Jeffrey (MDH); Hahn, Christine
Subject: CSTE pertussis case definition change

When: Friday, January 18, 2019 12:00 PM-1:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Skype Meeting

Hi all,

Thank you for your feedback - it looks like this date (Jan 18, 12p EST) will work best for almost all of you who have participated.

A tentative agenda for the call includes the following:
- Update on feedback from CSTE VPD subcommittee members on the proposed case definition changes and next steps
- Discussion on guidance document developed for healthcare professionals on pertussis diagnostics (updated version of guidance to be shared this week)

Please let me know if you have other suggestions for the agenda, or if you have any questions.

Look forward to speaking soon, and happy new year - Anna

.....

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[!OC([1033])!]
.....

From: Rivera, Aidsa (CDC/DDID/NCEZID/DVBD)
Sent: 1/9/2019 1:05:02 PM
To: Rivera, Aidsa (CDC/DDID/NCEZID/DVBD)
Cc:
Subject: FW: Dengue -- United States, 2018

attachments\0D67560CA0CD41FE_DengueArboNET_Jan92019.pdf

Colleagues,

Attached please find the last 2018 report regarding dengue activity in the United States, according to ArboNET's data.

As my other colleagues working with arboviral diseases, I will be reaching out to corresponding jurisdictions over the coming weeks to start 2018 data closeout processes.

Regards,
Aidsa
Aidsa Rivera, MS
Epidemiologist/Surveillance Officer
Centers for Disease Control and Prevention, NCEZID, DVBD, Dengue Branch

CDC Dengue Branch
1324 calle Cañada
San Juan, PR 00920-3860
Office: (787) 706-2257
Fax: (787) 706-2496
E-mail:erj2@cdc.gov

Provisional data

Dengue activity – United States, 2018
Provisional data reported to ArboNET
Wednesday, January 9, 2019

In 2010, dengue became a nationally reportable condition following approval by the Council of State and Territorial Epidemiologists, and case definitions were revised in 2015. ArboNET is a national electronic surveillance system for arboviral diseases in the U.S. administered by CDC. ArboNET was developed in response to the West Nile virus (WNV) epidemic in 1999 and non-WNV arboviral diseases were added to the system beginning in 2003.

Dengue cases have been reported to ArboNET since 2003. To better capture epidemiologic data on travel-associated cases, a dengue module was added in 2012. ArboNET data on reported dengue cases began to be disseminated to state health departments via weekly reports starting in August 2015.

In the United States, dengue presents in three epidemiologic settings:

- Endemic transmission – occurs in tropical areas where *Aedes* species mosquitoes are always present and dengue virus (DENV) transmission occurs throughout the year (e.g., Puerto Rico, Virgin Islands).
- Travel-associated cases – occurs in persons infected with a DENV while traveling to a dengue-endemic area of the world. Such cases are most often observed in regions of the U.S. where dengue is not endemic.
- Sporadic outbreaks – occurs in parts of the US where *Aedes sp.* mosquitoes exist, and are usually initiated from a returning traveler that is infected with the virus (e.g., Florida, US-Mexico border states).

The objectives of dengue reporting in ArboNET is to monitor disease epidemiology, provide timely information to public health official, and to monitor prevention efforts.

This update from the CDC Dengue Branch includes provisional data reported to ArboNET for **January 1, 2018 – December 31, 2018** for nationally notifiable dengue disease from 50 states and five territories. (Additional resources for dengue disease information and data are included on page 8). In some areas, **2010-2017** summarized data is also provided for the purposes of comparison.

_____
From: EPIXUpdate@cdc.gov
Sent: 1/12/2019 2:05:45 AM
To: D'Angeli, Marisa (DOH)
Cc:
Subject: Epi-X Today: Saturday, January 12, 2019

Epi-X reports posted in your areas of interest in the past 24 hours. To view a specific report, click on its URL.

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

Call for Cases: Legionnaires' Disease Associated with a Hotel in Casselton, North Dakota -- 2018/2019
The North Dakota Department of Health (NDDoH) is investigating three confirmed cases of legionellosis associated with a hotel in Casselton, ND.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69180

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

~*~ Global Immunization News Report, January 10, 2019 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Thursday, January 10, 2019.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69179

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

Influenza Summary Update, Week Ending January 5, 2019 (Week 1) -- United States, 2019
Influenza activity remains elevated in the U.S. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased slightly. Influenza A viruses have predominated in the U.S. since the beginning of October.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69176

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

Call for Cases: Hepatitis A Infection in a Food Handler/Restaurant -- Indiana, 2019
The Indiana State Department of Health (ISDH) has identified a confirmed case of hepatitis A in a food handler who is employed at a restaurant in Bloomington, IN. ISDH is requesting notification of hepatitis A cases that may have dined at this restaurant between Jan 2-6 to nstone2@isdh.in.gov.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69175

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~

~*~ Media Tracking Report, January 11, 2019 ~*~
Media stories include drug overdose deaths and typhoid fever in the US; hepatitis A in Arkansas, Indiana, and Ohio; influenza and E. coli in multiple states; gastrointestinal illness in Florida; rat lungworm disease in Hawaii; meningitis in New Jersey; drug-resistant infection in Wyoming; Ebola in DRC; polio in Mozambique; and other media coverage.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69174

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From: Banerjee, Emily (MDH)
Sent: 1/9/2019 1:58:25 PM
To: Aditi Dey,Allison Sierocki,Amanda Reiff,Amanda Tiffany,Amy Bogucki,Antonine Jean,Banerjee, Emily (MDH),Beth Isaac,Blake Hendrickson,Bree Barbeau,Caitlin Pedati,DeBolt, Chas (DOH),Debra S. Blog,Dulmini Wilson,Dylan Johns,Elizabeth Rausch-Phung,Emily Spence Davizon,Emmanuel Mendoza,Esther Cummings/Carolin Hoskins,Frank Beard,Griffith, Jayne (MDH),Heather Reid,Jeff Eason,Jennifer Rosen,Jennifer Zipprich,Jeremy Budd,Jessica Tuttle,Joel Blostein,Juventila Liko,Kali Neil,Kathleen Harriman,Kathleen Winter,Kathryn Sen,Katie Kendrick,Kelsey Sanders,Kurt Seetoo,Lexie Barber,Liliana Sanchez,Lily Tatham,Louisa Castrodale,Manisha Patel,Marija Popstefanija,Meagan Burns,Meghan Barnes,Mekete Asfaw,Monika Naus,Monique Landry,Nithal Kuwa,Paul R Cieslak,Perrianne Lurie,Rachel Wiseman,Richard Hoskins,Rob Ramaekers,Robert Arciuolo,Robin M Williams,Shalini Desai,Shane Brady,Stephanie Borchardt,Stephanie Massay,Stephanie Schauer
Cc:
Subject: No MMR Surveillance call tomorrow

attachments\E6512714B33F425E_image001.gif

Hi everyone,

Wanted to let you know that we will not be having the MMR Surveillance Workgroup call tomorrow as tentatively planned due to a schedule conflict. We will pick up with a call in June, details and agenda will be emailed in the next month or so. Thanks for understanding, and wish everyone a belated Happy New Year!
Emily

Emily Banerjee
Senior Epidemiologist | Vaccine Preventable Disease Surveillance Unit
Minnesota Department of Health
Office: 651-201-5488 | Fax: 651-201-4820
<http://www.health.state.mn.us/>
<https://www.facebook.com/mnhealth> <https://twitter.com/mnhealth>
<https://www.linkedin.com/company/mnhealth>
<https://www.instagram.com/mnhealth>
<https://www.youtube.com/user/MNDeptofHealth>

_____
From: EPIXUpdate@cdc.gov
Sent: 1/10/2019 2:04:10 AM
To: D'Angeli, Marisa (DOH)
Cc:
Subject: Epi-X Today: Thursday, January 10, 2019

Epi-X reports posted in your areas of interest in the past 24 hours. To view a specific report, click on its URL.

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
~*~ Global Immunization News Report, January 8, 2019 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Tuesday, January 8, 2019.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69159

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
FDA Enforcement Report -- United States, January 9, 2019
This report contains Class I, II, and III recalls of food and food products, drugs, biologics, and devices. The link to the full report is accessible through this posting.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69156

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~
~*~ Media Tracking Report, January 9, 2019 ~*~
Media stories include influenza in multiple states and countries; Legionnaires' disease in Illinois; AFM in multiple states; measles in New York and multiple countries; hepatitis A related recall in the US; hantavirus in Argentina and Chile; dengue fever in Brazil; Zika in Cuba; polio and Ebola in DRC; CCHF in Uganda; and other media coverage.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69157

From: Mary Goelz
Sent: 1/16/2019 1:45:47 PM
To: Turner, Susan (DOHi),Flake, Marie D (DOH),Black, Ryan (DOH),Bodden, Jaime (DOHi),Burkland, Anne (DOHi),Calder, Allegra (DOHi),Courogen, Maria (DOH),Davis, Michelle (DOH),Debolt, Meghan (DOHi),Delahunt, Regina (DOHi),Dzedzy, Ed (DOHi),Halvorson, Clark R (DOH),Joyner, Pama (DOH),Ketchel, Jeff (DOHi),Kirkpatrick, Vicki (DOHi),Lindquist, Scott W (DOH),Melnick, Alan (DOHi),Miller, Angi (DOH),Rohr Tran, Holly (DOHi),Schanz, Matt (DOHi),Schuler, Christopher (DOHi),Tammy Axlund ,Wilson, Lyndia (DOHi),Windom, David (DOHi),Wolfe, Roxanne (DOHi),Worsham, Dennis (DOHi),York, Danette (DOHi)
Cc:
Subject: RE: FPHS TWG Meeting 1/18/19 - proposed language for lab

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attachments\176F39C732DA4BB7_image009.png

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attachments\E4738DBB0F014446_image001.png

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attachments\0AC07F88339745D9_image004.png

attachments\4F4D3FACF65A4026_image002.png

attachments\09FAFC404EF34DBE_image003.png

I also like this description, Mary

Mary P. Goelz | Director
Pacific County Public Health and Human Services
1216 W Robert Bush Drive | P O Box 26 | South Bend, WA 98586
P: 360.875.9343 | F: 360.875.9323
7013 Sandridge Road | Long Beach, WA 98631
P: 360.642.9349 | F: 360.642.9352
mgoelz@co.pacific.wa.us
www.co.pacific.wa.us
After hours: 360.875.9397

From: Susan Turner <Susan.Turner@kitsappublichealth.org>

Sent: Wednesday, January 16, 2019 1:00 PM
To: Flake, Marie D (DOH) <marie.flake@doh.wa.gov>; Black, Ryan (DOH) <Ryan.Black@DOH.WA.GOV>; Bodden, Jaime (DOHi) <Jbodden@wsac.org>; Burkland, Anne (DOHi) <Anne.Burkland@kingcounty.gov>; Calder, Allegra (DOHi) <allegra@berkconsulting.com>; Courogen, Maria (DOH) <Maria.Courogen@DOH.WA.GOV>; Davis, Michelle (DOH) <Michelle.Davis@sboh.wa.gov>; Debolt, Meghan (DOHi) <mdebolt@co.walla-walla.wa.us>; Delahunt, Regina (DOHi) <rdelahun@whatcomcounty.us>; Dzedzy, Ed (DOHi) <edzedzy@co.lincoln.wa.us>; Mary Goelz <mgoelz@co.pacific.wa.us>; Halvorson, Clark R (DOH) <Clark.Halvorson@DOH.WA.GOV>; Joyner, Pama (DOH) <Pama.Joyner@DOH.WA.GOV>; Ketchel, Jeff (DOHi) <jketchel@snohd.org>; vkirkpatrick@co.jefferson.wa.us; Lindquist, Scott W (DOH) <scott.lindquist@doh.wa.gov>; Melnick, Alan (DOHi) <alan.melnick@clark.wa.gov>; Miller, Angi (DOH) <Angi.Miller@DOH.WA.GOV>; Rohr Tran, Holly (DOHi) <Holly.RohrTran@kingcounty.gov>; Schanz, Matt (DOHi) <mschanz@netchd.org>; Schuler, Christopher (DOHi) <cschuler@tpchd.org>; Tammy Axlund <taxlund@co.whatcom.wa.us>; Wilson, Lyndia (DOHi) <Lwilson@srhd.org>; Windom, David (DOHi) <DWindom@co.mason.wa.us>; Wolfe, Roxanne (DOHi) <Roxanne.wolfe@clark.wa.gov>; Worsham, Dennis (DOHi) <Dennis.worsham@kingcounty.gov>; York, Danette (DOHi) <danette.york@lewiscountywa.gov>
Subject: RE: FPHS TWG Meeting 1/18/19 - proposed language for lab

This is excellent, and for my part, I agree. Susan

Susan Turner MD, MPH, MS | Health Officer
Kitsap Public Health District
345 6th St., Suite300 | Bremerton, WA 98337
(360)728-2250 Office | (360)728-2235 Main
susan.turner@kitsappublichealth.org | kitsappublichealth.org
<http://www.kitsappublichealth.org/>

<http://www.kitsappublichealth.org/>

<https://www.facebook.com/KitsapPublicHealthDistrict>

From: Flake, Marie D (DOH) <marie.flake@doh.wa.gov>
Sent: Tuesday, January 15, 2019 4:15 PM
To: Black, Ryan (DOH) <Ryan.Black@DOH.WA.GOV>; Bodden, Jaime (DOHi) <Jbodden@wsac.org>; Burkland, Anne (DOHi) <Anne.Burkland@kingcounty.gov>; Calder, Allegra (DOHi) <allegra@berkconsulting.com>; Courogen, Maria (DOH) <Maria.Courogen@DOH.WA.GOV>; Davis, Michelle (DOH) <Michelle.Davis@sboh.wa.gov>; Debolt, Meghan (DOHi) <mdebolt@co.walla-walla.wa.us>; Delahunt, Regina (DOHi) <rdelahun@whatcomcounty.us>; Dzedzy, Ed (DOHi) <edzedzy@co.lincoln.wa.us>; Flake, Marie D (DOH) <marie.flake@doh.wa.gov>; Goelz, Mary (DOHi) <mgoelz@co.pacific.wa.us>; Halvorson, Clark R (DOH) <Clark.Halvorson@DOH.WA.GOV>; Joyner, Pama (DOH) <Pama.Joyner@DOH.WA.GOV>; Ketchel, Jeff (DOHi) <jketchel@snohd.org>; vkirkpatrick@co.jefferson.wa.us; Lindquist, Scott W (DOH) <scott.lindquist@doh.wa.gov>; Melnick, Alan (DOHi) <alan.melnick@clark.wa.gov>; Miller, Angi (DOH) <Angi.Miller@DOH.WA.GOV>; Rohr Tran, Holly (DOHi) <Holly.RohrTran@kingcounty.gov>; Schanz, Matt (DOHi) <mschanz@netchd.org>; Schuler, Christopher (DOHi) <cschuler@tpchd.org>; Tammy Axlund <taxlund@co.whatcom.wa.us>; Susan Turner <susan.turner@kitsappublichealth.org>;

Wilson, Lyndia (DOHi) <Lwilson@srhd.org>; Windom, David (DOHi) <DWindom@co.mason.wa.us>; Wolfe, Roxanne (DOHi) <Roxanne.wolfe@clark.wa.gov>; Worsham, Dennis (DOHi) <Dennis.worsham@kingcounty.gov>; York, Danette (DOHi) <danette.york@lewiscountywa.gov>
Subject: FPHS TWG Meeting 1/18/19 - proposed language for lab

TWG,
I'm share this with Ed's permissions. He has a proposal for your consideration.

I was reviewing the definitions and I struggled with the definition around lab sampling, so I created my own definition that sounds better to me. How about this:

"Utilizing scientific methods and best practices, when indicated, to collect environmental samples and human specimens for laboratory analysis to confirm or rule out disease presence. This includes packaging in conformance with DOT and USPS requirements and shipping to a certified laboratories for analysis."

Perhaps this would replace the definitions identified in:

Page 32, G (CD) 4 (Investigation) d – adding efforts to collect, package, ship and test CD samples
Page 41 & 42, I (EH) 3 (Investigations) – adding efforts to collect, package, ship and test EH samples

Just a thought

Ed Dzedzy
Lincoln County

From: Flake, Marie D (DOH) [mailto:marie.flake@doh.wa.gov]
Sent: Friday, January 11, 2019 1:57 PM
To: Black, Ryan (DOH) <Ryan.Black@DOH.WA.GOV>; Bodden, Jaime (DOHi) <Jbodden@wsac.org>; Burkland, Anne (DOHi) <Anne.Burkland@kingcounty.gov>; Calder, Allegra (DOHi) <allegra@berkconsulting.com>; Courogen, Maria (DOH) <Maria.Courogen@DOH.WA.GOV>; Davis, Michelle (DOH) <Michelle.Davis@sboh.wa.gov>; Debolt, Meghan (DOHi) <mdebolt@co.walla-walla.wa.us>; Delahunt, Regina (DOHi) <rdelahun@whatcomcounty.us>; Ed Dzedzy <edzedzy@co.lincoln.wa.us>; Flake, Marie D (DOH) <marie.flake@doh.wa.gov>; Goelz, Mary (DOHi) <mgoelz@co.pacific.wa.us>; Halvorson, Clark R (DOH) <Clark.Halvorson@DOH.WA.GOV>; Joyner, Pama (DOH) <Pama.Joyner@DOH.WA.GOV>; Ketchel, Jeff (DOHi) <jketchel@snohd.org>; Kirkpatrick, Vicki (DOHi) <VKirkpatrick@co.jefferson.wa.us>; Lindquist, Scott W (DOH) <scott.lindquist@doh.wa.gov>; Melnick, Alan (DOHi) <alan.melnick@clark.wa.gov>; Miller, Angi (DOH) <Angi.Miller@DOH.WA.GOV>; Rohr Tran, Holly (DOHi) <Holly.RohrTran@kingcounty.gov>; Schanz, Matt (DOHi) <mschanz@netchd.org>; Schuler, Christopher (DOHi) <cschuler@tpchd.org>; Tammy Axlund <taxlund@co.whatcom.wa.us>; Turner, Susan (DOHi) <Susan.Turner@kitsappublichealth.org>; Wilson, Lyndia (DOHi) <Lwilson@srhd.org>; Windom, David (DOHi) <DWindom@co.mason.wa.us>; Wolfe, Roxanne (DOHi) <Roxanne.wolfe@clark.wa.gov>; Worsham, Dennis (DOHi) <Dennis.worsham@kingcounty.gov>; York, Danette (DOHi) <danette.york@lewiscountywa.gov>
Subject: FPHS TWG Meeting 1/18/19

Dear TWG,
Happy New Year. We scheduled to meet next Friday, 1/18, 1:30-3pm to finalize the

functional definitions – for this moment in time. Connection info is below and should be on your calendar.

Attached is the final draft version we have used for the past year with the tweaks this group settled on in December shown using track changes. I also incorporated the comment receive by e-mail from Susan after that meeting. Below is a summary of the proposed changes. Please review in advance so we can complete this task during the meeting. If you are not able to participate in the meeting, please send your comments in advance. Thank you.

Connection
* Webinar: https://global.gotomeeting.com/join/990414661
* Audio by phone: (872) 240-3212 / Access Code: 990-414-661
Summary of Proposed Changes to Functional Definitions – for discussion/approval by TWG on 1/18/19

* Page 29, G (CD) 1 (Data) – b (Immunization Information System) – Centralized Activity; c, d, f – adding effort for data input, quality, educating providers.

* Page 31, G (CD) 3 (Immunizations) & b – adding effort for promoting IIS and data input, quality, educating providers.

* Page 32, G (CD) 4 (Investigation) d – adding efforts to collect, package, ship and test CD samples; e – receive case reports from providers, labs and other reporters.

* Page 34, G (CD) 5 (PHL) – Centralized Activity with support from PHSKC

* Page 41 & 42, I (EH) 3 (Investigations) – adding efforts to collect, package, ship and test EH samples

* Page 47, J (MCH) 3 (Newborn screening) – Centralized Activity

* Page 50, K (Access) 3 (Licensing) – Centralized Activity

* Page 52, L (VR) 1 (Data system) – Centralized Activity

Talk with you next week.

Marie

Marie Flake
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<https://twitter.com/wadepthealth?lang=en>
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<https://www.instagram.com/wadepthealth/>
<https://www.youtube.com/channel/UCTSCpezTD0TjiiAOuJY7f5w/doh>
<https://medium.com/@WADeptHealth>

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<https://www.facebook.com/WADeptHealth/>
<https://www.instagram.com/wadepthealth/>
<https://www.youtube.com/channel/UCTSCpezTD0TjiiAOuJY7f5w/doh>
<https://medium.com/@WADeptHealth>

_____
From: Kniss, Krista (CDC/DDID/NCIRD/ID)
Sent: 12/28/2018 8:07:23 AM
To:
Cc:
Subject: CDC/Influenza Division Weekly Influenza Surveillance Report (Week 51)

attachments\3F8948E5101449E3_1851 CDC FluView Dec 22 2018.pdf

Attached is the CDC/Influenza Division Weekly Influenza Surveillance Report (FluView) for week 51, ending December 22, 2018.

Please let me know if you have any questions.

Thanks,
Krista Kniss
Epidemiology and Prevention Branch
Influenza Division
Centers for Disease Control and Prevention

From: Matheson, Jasmine S (DOH)
Sent: 1/16/2019 1:18:28 PM
To: Czapla, Monica
Subject: List of potential resources

attachments\8C1C340D59354D9D_image001.png

Hi Monica
Following up from our conversation earlier:

o Epi case investigation support
o Contact investigation support
o Database support
o Call Center
* Poison Control Option
o IMT support
o Text case follow-up services
o MCM
* Help from immunization program to have immunization records tracked down through Oregon HA and registry system
Please let us know how we can assist.
Best,
Jasmine

Jasmine Matheson, MPH
Program Manager / Refugee Health Coordinator
Disease Control and Health Statistics
Washington State Department of Health
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206-418-5603 | www.doh.wa.gov
<https://www.doh.wa.gov/Newsroom/SocialMedia>

www.doh.wa.gov/refugeehealth

_____
From: EPIXUpdate@cdc.gov
Sent: 1/11/2019 2:05:33 AM
To: D'Angeli, Marisa (DOH)
Cc:
Subject: Epi-X Today: Friday, January 11, 2019

Epi-X reports posted in your areas of interest in the past 24 hours. To view a specific report, click on its URL.

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
DoD Febrile Respiratory Illness Weekly Surveillance Report -- United States, January 10, 2019
This weekly report provides a snapshot of current febrile respiratory illnesses (FRI) surveillance among military recruit, DoD beneficiary, and U.S.-Mexico border (CDC-CDPH-BIDS) populations.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69172

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
CDC OSSAM PHIO International Disease Summary -- Multiple Nations, January 4 - 11, 2019
Diseases reported in this summary include measles in Uganda and an unidentified illness in India.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69171

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
~*~ Global Immunization News Report, January 9, 2019 ~*~
Today's Global Immunization News report includes polio, measles, mumps, cholera, acute flaccid myelitis, policy and funding, vaccine demand and safety, and other news for Wednesday, January 9, 2019.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69164

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
FSIS Class I Recall: J.H. Routh Packing Co. Recalls Pork Sausage Products Due to Possible Foreign Matter Contamination -- 2019
J.H. Routh Packing Co. is recalling ~1,719 pounds of raw pork sausage products that may be contaminated with extraneous materials, specifically rubber. These items were shipped to retail locations in Kentucky, Ohio, and Pennsylvania. There have been no confirmed reports of adverse effects.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69161

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~
~*~ Media Tracking Report, January 10, 2019 ~*~
Media stories include opioids in Massachusetts and Washington; enterococci in Hawaii; hepatitis A and E. coli in the United States; influenza in multiple states and countries; measles in New York; stomach illnesses in Wisconsin; antibiotic-resistant bacterial infection and plague in Wyoming; Zika in Cuba; polio in DRC; and other media coverage.
https://epix2.cdc.gov/v2/Reports/Display.aspx?id=69163

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(877) 438-3749
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(877) 862-2392 (toll free within the United States)
+1-770-488-7100 (If you cannot use the toll free number above, please call the CDC Emergency Operations Center and ask to speak to the Epi-X editor on call.)

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Receive this message in Text format: https://epix2.cdc.gov/v2/Preferences.aspx#Email

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From: Armstrong, Marissa
Sent: 1/16/2019 4:52:11 PM
To: Graham, Julie A (DOH)
Subject: Re: Ukrainian fact sheet

Thank you!

Marissa Armstrong
Communications specialist
PUBLIC HEALTH

w. 564.397.7307
c. 360.518.1731

On Jan 16, 2019, at 4:51 PM, Graham, Julie A (DOH) <Julie.Graham@DOH.WA.GOV> wrote:

Hi Marissa,
I'm not the PIO for the incident now, BUT, yes we do (including Spanish). I see the LOFR and PIO box are CC;d here and they can find and send them all to you.

From: Armstrong, Marissa [mailto:Marissa.Armstrong@clark.wa.gov]
Sent: Wednesday, January 16, 2019 4:49 PM
To: Graham, Julie A (DOH) <Julie.Graham@DOH.WA.GOV>
Cc: Kate Willson <kate.willson@multco.us>; Moysiuk, Sharon A (DOH) <Sharon.Moysiuk@DOH.WA.GOV>; DOH-LOFR (DOH) <doh-lofr@doh.wa.gov>
Subject: Re: Ukrainian fact sheet

Do you have this in other languages as well? I'd like to at least add Spanish, if possible

Marissa Armstrong
Communications specialist
PUBLIC HEALTH

w. 564.397.7307
c. 360.518.1731

On Jan 16, 2019, at 9:01 AM, Graham, Julie A (DOH) <Julie.Graham@DOH.WA.GOV> wrote:
Here's a Ukrainian fact sheet about measles and vaccine. I'm attaching the English version so you can see what's on the Uk version too.
Please let me know if you need anything

From: Moysiuk, Sharon A (DOH)
Sent: Wednesday, January 16, 2019 8:50 AM
To: Graham, Julie A (DOH) <Julie.Graham@DOH.WA.GOV>
Subject:

<Measles Basic Info_ukranian.pub>
<Measles Basic Info_english (002).pub>

This e-mail and related attachments and any response may be subject to public disclosure under state law.

From: Czapla, Monica
Sent: 1/16/2019 3:12:22 PM
To: Matheson, Jasmine S (DOH)
Subject: RE: List of potential resources

attachments\58B079D2D36F4D37_image011.jpg
attachments\4818379F97564E55_image001.jpg
attachments\1F74890267A04420_image013.jpg
attachments\E390C6413EE54DF2_image010.png
attachments\5EE8C5D0A9744C47_image012.jpg

Hi Jasmine:

Thank you for all the offered support. We would gladly take you up on the following, through the end of next week and likely longer:
o Epi case investigation support (as much as you can provide)
o Contact investigation support (as much as you can provide)
o Database support
o MCM: Help from immunization program to have immunization records tracked down through Oregon HA and registry system
Do you have info on the cost of the Poison Control option?

We have access to IVR, but if you info or examples of how other counties have used for measles please sure.

Thanks,

<https://www.clark.wa.gov/>

Monica Czapla, MPH
Program Manager - Infectious Diseases
PUBLIC HEALTH

564.397.8002 (note: our office area code has changed)
360.836.9086 cell

<https://www.facebook.com/pages/Clark-County-WA/1601944973399185>
<https://twitter.com/ClarkCoWA> <https://www.youtube.com/user/ClarkCoWa/>

From: Matheson, Jasmine S (DOH) [mailto:Jasmine.Matheson@DOH.WA.GOV]
Sent: Wednesday, January 16, 2019 1:18 PM
To: Czapla, Monica
Cc: DOH-OSC (DOH); DeBolt, Chas (DOH)
Subject: List of potential resources

Hi Monica
Following up from our conversation earlier:

o Epi case investigation support
o Contact investigation support
o Database support
o Call Center

* Poison Control Option
o IMT support
o Text case follow-up services
o MCM
* Help from immunization program to have immunization records tracked down through Oregon HA and registry system
Please let us know how we can assist.
Best,
Jasmine

Jasmine Matheson, MPH
Program Manager / Refugee Health Coordinator
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<https://www.doh.wa.gov/Newsroom/SocialMedia>

www.doh.wa.gov/refugeehealth

Provisional data

Dengue activity – United States, 2018
Provisional data reported to ArboNET
Wednesday, January 9, 2019

In 2010, dengue became a nationally reportable condition following approval by the Council of State and Territorial Epidemiologists, and case definitions were revised in 2015. ArboNET is a national electronic surveillance system for arboviral diseases in the U.S. administered by CDC. ArboNET was developed in response to the West Nile virus (WNV) epidemic in 1999 and non-WNV arboviral diseases were added to the system beginning in 2003.

Dengue cases have been reported to ArboNET since 2003. To better capture epidemiologic data on travel-associated cases, a dengue module was added in 2012. ArboNET data on reported dengue cases began to be disseminated to state health departments via weekly reports starting in August 2015.

In the United States, dengue presents in three epidemiologic settings:

- Endemic transmission – occurs in tropical areas where *Aedes* species mosquitoes are always present and dengue virus (DENV) transmission occurs throughout the year (e.g., Puerto Rico, Virgin Islands).
- Travel-associated cases – occurs in persons infected with a DENV while traveling to a dengue-endemic area of the world. Such cases are most often observed in regions of the U.S. where dengue is not endemic.
- Sporadic outbreaks – occurs in parts of the US where *Aedes sp.* mosquitoes exist, and are usually initiated from a returning traveler that is infected with the virus (e.g., Florida, US-Mexico border states).

The objectives of dengue reporting in ArboNET is to monitor disease epidemiology, provide timely information to public health official, and to monitor prevention efforts.

This update from the CDC Dengue Branch includes provisional data reported to ArboNET for **January 1, 2018 – December 31, 2018** for nationally notifiable dengue disease from 50 states and five territories. (Additional resources for dengue disease information and data are included on page 8). In some areas, **2010-2017** summarized data is also provided for the purposes of comparison.

Dengue activity in 2018

As of December 31, 2018, forty-one states and three territories have reported dengue cases to ArboNET for 2018. **[Figure 1]**.

Figure 1. Laboratory-positive travel-associated and locally-acquired dengue cases from the 50 states and five territories — United States, 2018 as of December 31, 2018.

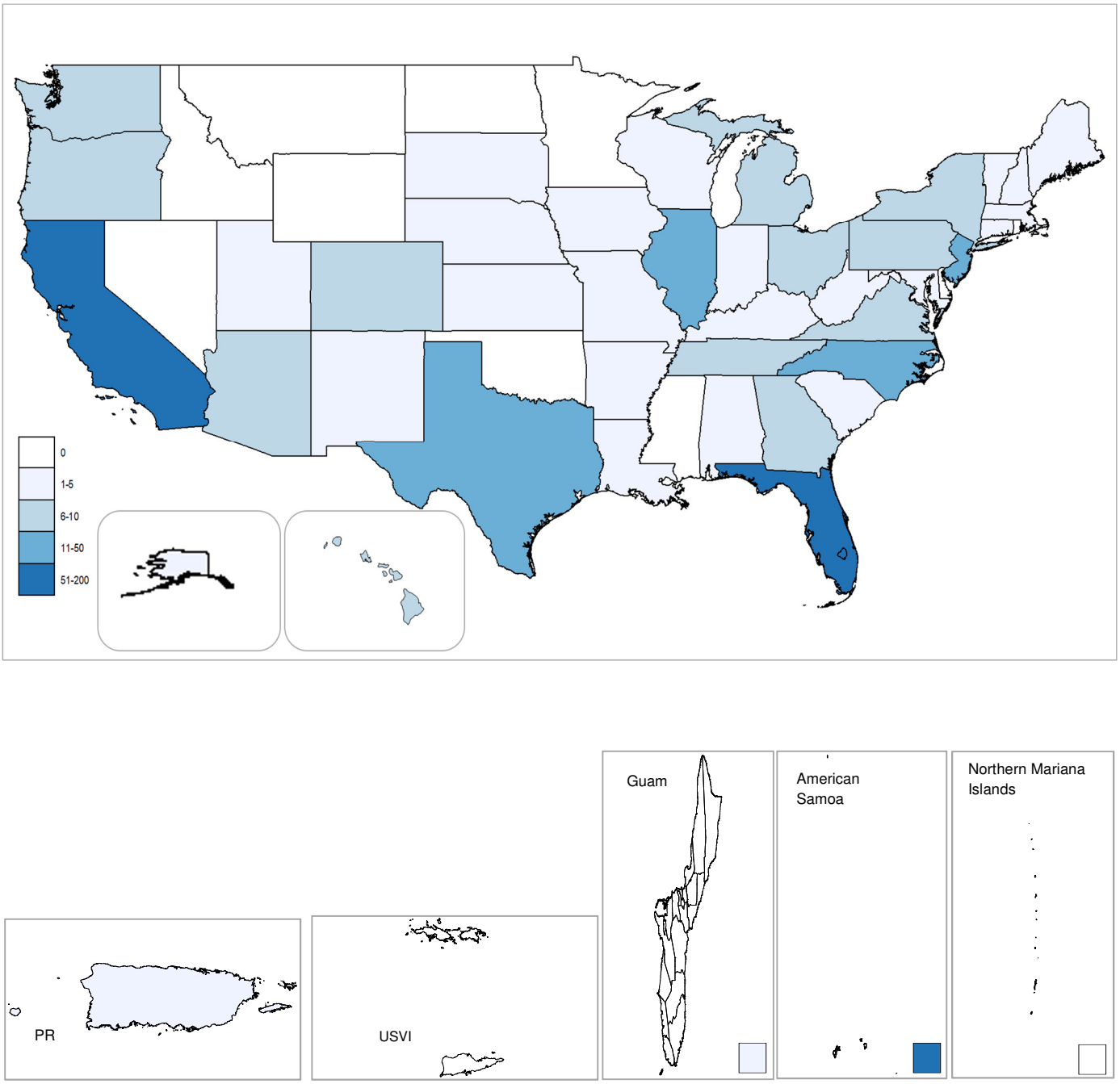


Table 1. Cumulative laboratory-positive[ǂ] dengue cases reported to ArboNET by state and status of travel history — United States, 2018 (as of December 31, 2018) compared to 2010-2017 summarized data.

State	2018		2010-2017			
	Travel-associated cases	Locally-acquired cases[ǂǂ]	Travel-associated cases		Locally-acquired cases[ǂǂ]	
	No.	No.	Median	Range (Min. – Max.)	Median	Range (Min. – Max.)
Total	343	154	3	0-197	0.5	0-10911
Alabama	3	0	4	0-5	0	0-0
Alaska	2	0	1	0-5	0	0-0
American Samoa	0	150	0	0-1	0	0-199
Arizona	9	0	10	1-98	0	0-0
Arkansas	2	0	1	0-4	0	0-0
California	79	0	116.5	5-197	0	0-0
Colorado	9	0	3	0-21	0	0-0
Connecticut	2	0	4.5	0-18	0	0-0
Delaware	0	0	1	0-2	0	0-0
District of Columbia	2	0	1	0-11	0	0-0
Florida	52	1	79	16-137	5.5	0-58
Georgia	6	0	8.5	4-20	0	0-0
Guam	3	0	0	0-1	0	0-0
Hawaii	10	0	10	0-19	0	0-200
Idaho	0	0	1	0-4	0	0-0
Illinois	14	0	22	7-35	0	0-0
Indiana	1	0	5.5	0-14	0	0-0
Iowa	5	0	4	2-11	0	0-0
Kansas	2	0	3	1-8	0	0-0
Kentucky	2	0	1	0-4	0	0-0
Louisiana	2	0	4.5	1-6	0	0-0
Maine	2	0	1	0-6	0	0-0
Maryland	5	0	8.5	0-13	0	0-0
Massachusetts	2	0	2	0-17	0	0-0
Michigan	8	0	9	5-16	0	0-0
Minnesota	0	0	11.5	0-29	0	0-0
Mississippi	0	0	1	0-2	0	0-0
Missouri	1	0	4	0-13	0	0-0
Montana	0	0	2	0-5	0	0-0
Nebraska	1	0	0.5	0-7	0	0-0
Nevada	0	0	2.5	0-6	0	0-0

New Hampshire	1	0	0.5	0-5	0	0-0
New Jersey	20	0	21.5	0-84	0	0-0
New Mexico	1	0	0.5	0-5	0	0-0
New York	10	0	111.5	32-183	0	0-1
North Carolina	10	1¥	8	0-13	0	0-0
North Dakota	0	0	1	0-2	0	0-0
Northern Mariana Islands	0	0	0	0-0	0	0-0
Ohio	7	0	7.5	2-16	0	0-0
Oklahoma	0	0	2	0-5	0	0-0
Oregon	10	0	0	0-9	0	0-0
Pennsylvania	9	0	21	4-24	0	0-0
Puerto Rico	1	1	0	0-0	1034	9-10911
Rhode Island	0	0	2	0-9	0	0-0
South Carolina	3	0	3	0-13	0	0-0
South Dakota	1	0	1.5	0-3	0	0-0
Tennessee	6	0	4.5	1-13	0	0-0
Texas	18	1	33	7-71	0	0-24
U.S. Virgin Islands	0	0	0	0-1	7	0-174
Utah	2	0	0.5	0-6	0	0-0
Vermont	1	0	3	0-4	0	0-0
Virginia	8	0	16.5	8-28	0	0-0
Washington	6	0	17	9-24	0	0-0
West Virginia	1	0	0.5	0-2	0	0-0
Wisconsin	4	0	8	5-17	0	0-0
Wyoming	0	0	0	0-1	0	0-0

ǂ Includes confirmed and probable dengue cases, the case definitions for which can be found online at: http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/case-definition/2015/

ǂǂ No history of travel to a dengue-endemic region in the 14 days before illness onset

¥ Laboratory acquired case

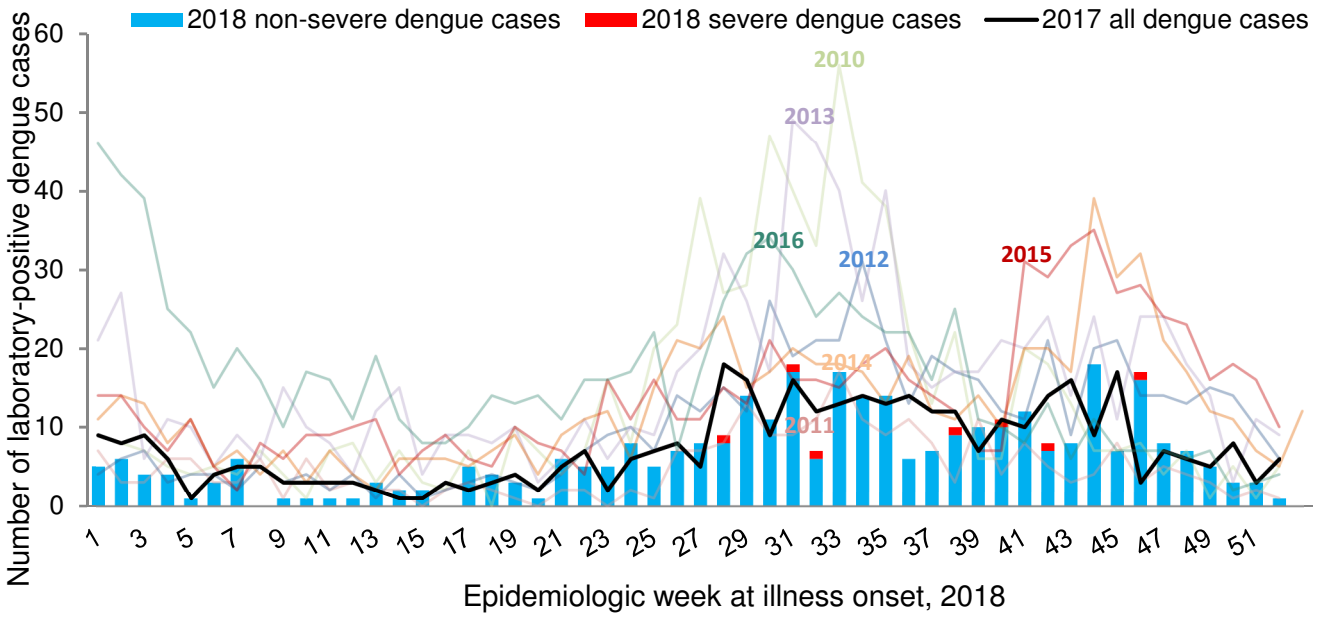
Table 2. Cumulative laboratory-positive travel-associated and locally-acquired dengue cases reported to ArboNET by state and disease severity — United States, 2018 (as of December 31, 2018).

State	2018			
	Dengue cases*		Severe dengue cases*	
	No.	%	No.	%
Total	490	100	7	100
Alabama	2	0	1	14
Alaska	2	0	0	0
American Samoa	150	31	0	0
Arizona	8	2	1	14
Arkansas	2	0	0	0
California	79	16	0	0
Colorado	9	2	0	0
Connecticut	2	0	0	0
Delaware	0	0	0	0
District of Columbia	2	0	0	0
Florida	50	10	3	43
Georgia	6	1	0	0
Guam	3	1	0	0
Hawaii	10	2	0	0
Idaho	0	0	0	0
Illinois	14	3	0	0
Indiana	1	0	0	0
Iowa	5	1	0	0
Kansas	2	0	0	0
Kentucky	2	0	0	0
Louisiana	2	0	0	0
Maine	2	0	0	0
Maryland	5	1	0	0
Massachusetts	2	0	0	0
Michigan	8	2	0	0
Minnesota	0	0	0	0
Mississippi	0	0	0	0
Missouri	1	0	0	0
Montana	0	0	0	0
Nebraska	1	0	0	0
Nevada	0	0	0	0
New Hampshire	1	0	0	0
New Jersey	20	4	0	0
New Mexico	1	0	0	0

New York	10	2	0	0
North Carolina	11	2	0	0
North Dakota	0	0	0	0
Northern Mariana Islands	0	0	0	0
Ohio	7	1	0	0
Oklahoma	0	0	0	0
Oregon	9	2	1	14
Pennsylvania	9	2	0	0
Puerto Rico	2	0	0	0
Rhode Island	0	0	0	0
South Carolina	3	1	0	0
South Dakota	1	0	0	0
Tennessee	6	1	0	0
Texas	19	4	0	0
U.S. Virgin Islands	0	0	0	0
Utah	2	0	0	0
Vermont	1	0	0	0
Virginia	8	2	0	0
Washington	6	1	0	0
West Virginia	1	0	0	0
Wisconsin	3	1	1	14
Wyoming	0	0	0	0

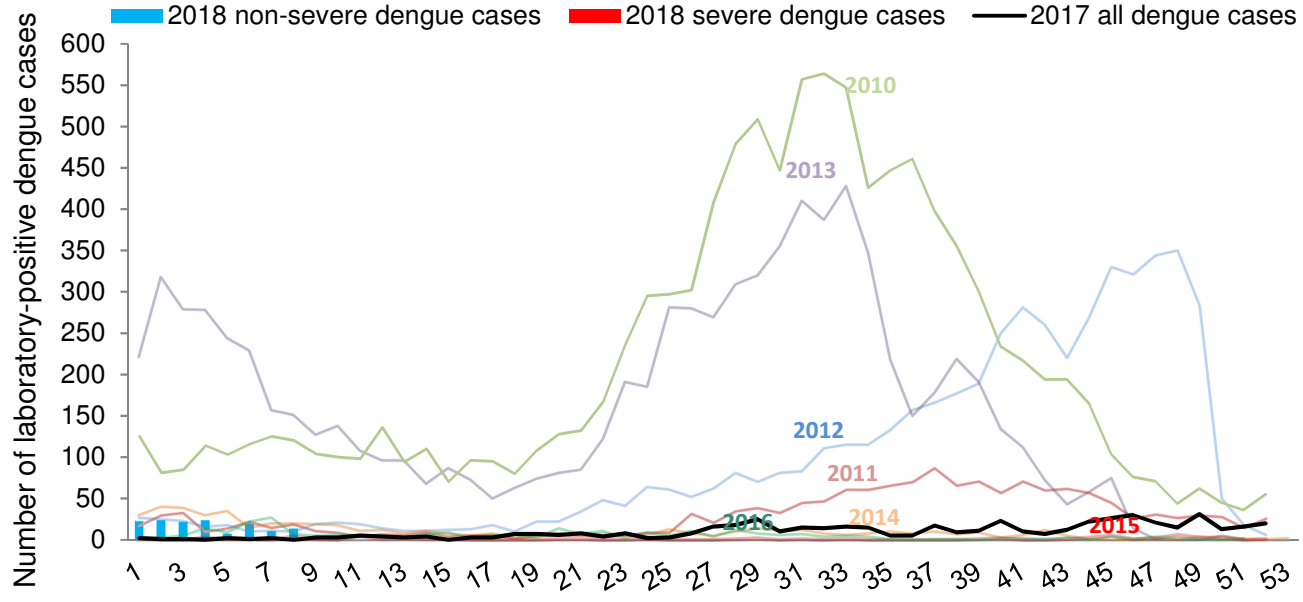
*Case definitions for dengue and severe dengue can be found online at:
http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/case-definition/2015/

Figure 2. Number of laboratory-positive travel-associated dengue cases from 50 US states by week of illness onset, 2018



* Bars refer to 2018 non-severe and severe travel-associated dengue cases from 50 US states by week of illness onset. In addition, current data (2018) is compared to previous years (i.e. 2010-2017) overall dengue cases which are depicted by lines.

Figure 3. Number of laboratory-positive travel-associated dengue cases from five US territories by week of illness onset, 2018



Additional resources

For additional dengue disease information and data, please visit the following websites:

- CDC's Dengue Branch:
  http://www.cdc.gov/dengue/

- National Notifiable Diseases Surveillance System
  http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/

- U.S. Virgin Islands Department of Health
  https://www.facebook.com/virginislandsDOH/

- Puerto Rico Department of Health
  http://www.salud.gov.pr/Estadisticas-Registros-y-Publicaciones/Informes%20Arbovirales/Reporte%20ArboV%20semana%2039-2018.pdf

FLUVIEW
A Weekly Influenza Surveillance Report Prepared by the Influenza Division

2018-2019 Influenza Season
Week 1 ending January 5, 2019

All data are preliminary and may change as more reports are received.

An overview of the CDC influenza surveillance system, including methodology and detailed descriptions of each data component, is available at http://www.cdc.gov/flu/weekly/overview.htm.

Synopsis: Influenza activity remains elevated in the United States. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending January 5, 2019:

- **Viral Surveillance**: The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased slightly. Influenza A viruses have predominated in the United States since the beginning of October. Influenza A(H1N1)pdm09 viruses have predominated in most areas of the country, however influenza A(H3) viruses have predominated in the southeastern United States (HHS Region 4).
    - **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
    - **Antiviral Resistance:** All viruses tested show susceptibility to the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir).
- **Influenza-like Illness Surveillance**: The proportion of outpatient visits for influenza-like illness (ILI) decreased from 4.0% to 3.5%, but remains above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
    - **ILI State Activity Indicator Map:** New York City and 15 states experienced high ILI activity; 12 states experienced moderate ILI activity; the District of Columbia, Puerto Rico and eight states experienced low ILI activity; and 15 states experienced minimal ILI activity.
- **Geographic Spread of Influenza**: The geographic spread of influenza in 30 states was reported as widespread; Puerto Rico and 17 states reported regional activity; two states reported local activity; the District of Columbia, the U.S. Virgin Islands and one state reported sporadic activity; and Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 9.1 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (22.9 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality**: The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths**: Three influenza-associated pediatric deaths were reported to CDC during week 1.

National and Regional Summary of Select Surveillance Components

HHS Surveillance Regions*	Data for current week			Predominant flu virus reported by public health laboratories for the most recent three weeks
	Out-patient ILI†	Number of jurisdictions reporting regional or widespread activity	% respiratory specimens positive for flu in clinical laboratories‡	
Nation	Elevated	48 of 54	12.7%	Influenza A(H1N1)pdm09
Region 1	Elevated	6 of 6	15.3%	Influenza A(H1N1)pdm09
Region 2	Elevated	3 of 4	11.8%	Influenza A(H1N1)pdm09
Region 3	Elevated	5 of 6	8.0%	Influenza A(H1N1)pdm09
Region 4	Elevated	7 of 8	20.9%	Influenza A(H3)
Region 5	Elevated	6 of 6	11.8%	Influenza A(H1N1)pdm09
Region 6	Elevated	5 of 5	16.8%	Influenza A(H1N1)pdm09
Region 7	Elevated	4 of 4	10.4%	Influenza A(H1N1)pdm09
Region 8	Elevated	6 of 6	15.1%	Influenza A(H1N1)pdm09
Region 9	Elevated	3 of 5	14.9%	Influenza A(H1N1)pdm09
Region 10	Elevated	3 of 4	9.1%	Influenza A(H1N1)pdm09

*http://www.hhs.gov/about/agencies/staff-divisions/iea/regional-offices/index.html
† Elevated means the % of visits for ILI is at or above the national or region-specific baseline.
§ Includes all 50 states, the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands
‡ National data are for current week; regional data are for the most recent three weeks.

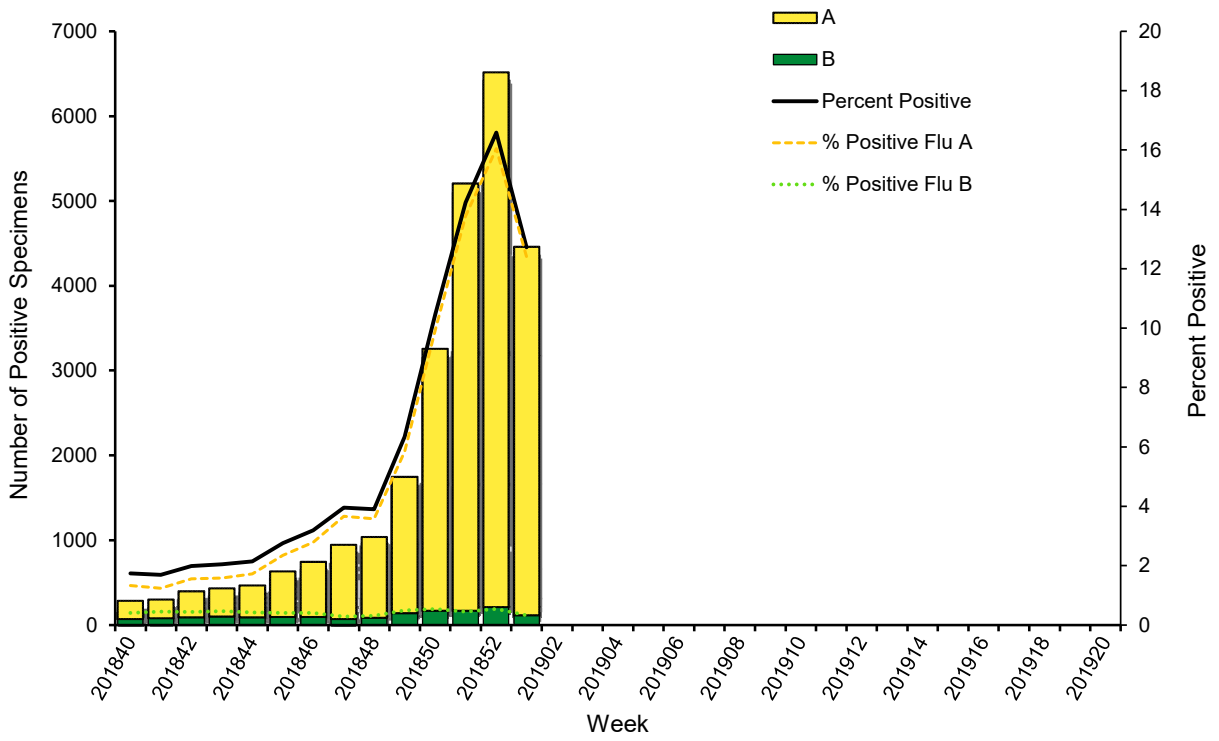
U.S. Virologic Surveillance: WHO and NREVSS collaborating laboratories, which include both public health and clinical laboratories located in all 50 states, Puerto Rico, Guam, and the District of Columbia, report to CDC the total number of respiratory specimens tested for influenza and the number positive for influenza by virus type. In addition, public health laboratories also report the influenza A subtype (H1 or H3) and influenza B lineage information of the viruses they test and the age or age group of the persons from whom the specimens were collected.

Additional virologic data, including national, regional and select state-level data, can be found at: http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html. Age group proportions and totals by influenza subtype reported by public health laboratories can be found at: http://gis.cdc.gov/grasp/fluview/flu_by_age_virus.html.

The results of tests performed by clinical laboratories are summarized below.

	Week 1	Data Cumulative since September 30, 2018 (week 40)
No. of specimens tested	35,059	363,555
No. of positive specimens (%)	4,460 (12.7%)	26,430 (7.3%)
Positive specimens by type		
Influenza A	4,347 (97.5%)	24,867 (94.1%)
Influenza B	113 (2.5%)	1,563 (5.9%)

Influenza Positive Tests Reported to CDC by U.S. Clinical Laboratories, National Summary, 2018-2019 Season

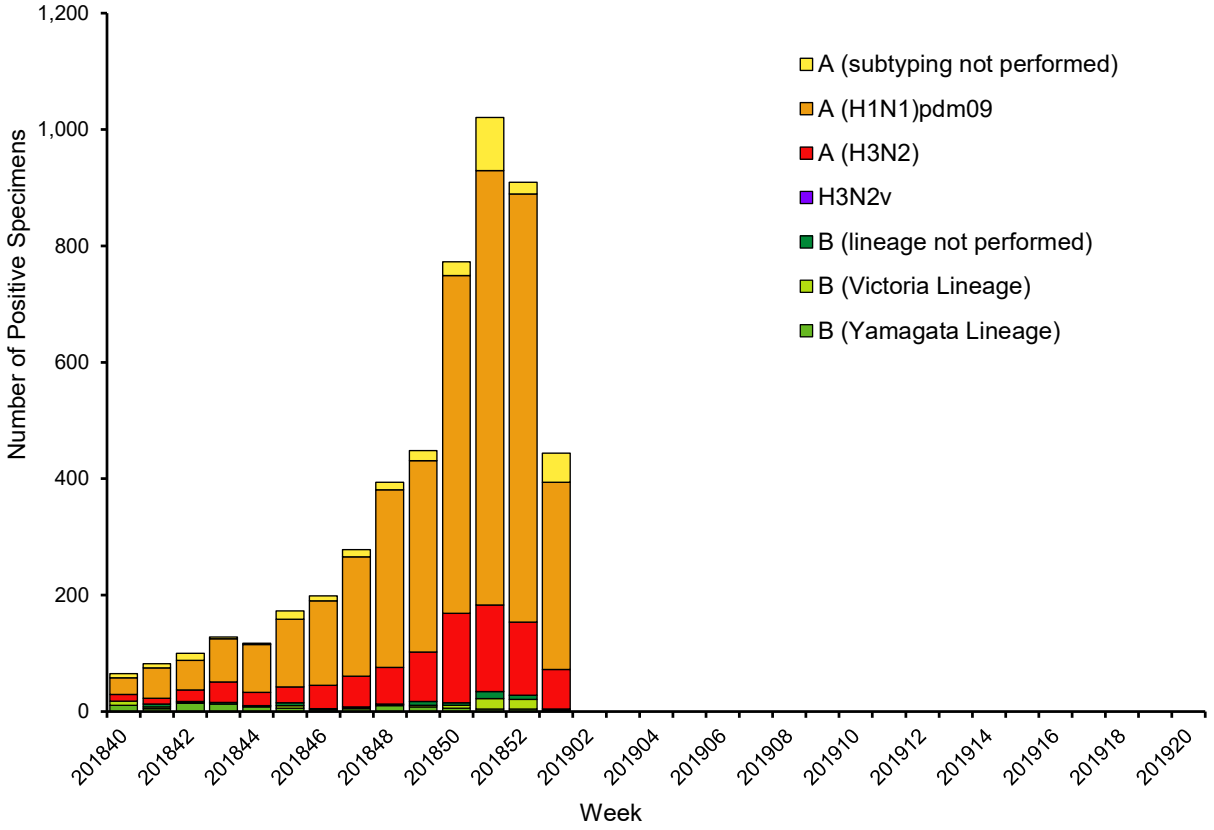


The results of tests performed by public health laboratories are summarized below.

	Week 1	Data Cumulative since September 30, 2018 (week 40)
No. of specimens tested	833	18,125
No. of positive specimens*	444	5,131
Positive specimens by type/subtype		
Influenza A	440 (99.1%)	4,918 (95.8%)
(H1N1)pdm09	322 (82.6%)	3,772 (81.4%)
H3N2	68 (17.4%)	864 (18.6%)
Subtyping not performed	50	282
Influenza B	4 (0.9%)	213 (4.2%)
Yamagata lineage	0 (0%)	97 (58.8%)
Victoria lineage	2 (100%)	68 (41.2%)
Lineage not performed	2	48

*The percent of specimens testing positive for influenza is not reported because public health laboratories often receive samples that have already tested positive for influenza at a clinical laboratory and therefore percent positive would not be a valid indicator of influenza activity. Additional information is available at http://www.cdc.gov/flu/weekly/overview.htm

Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, 2018-2019 Season



Influenza Virus Characterization: Close monitoring of influenza viruses is required to better assess the potential impact on public health. CDC characterizes influenza viruses through one or more tests including genomic sequencing, hemagglutination inhibition (HI) and/or neutralization based Focus Reduction assays (FRA). These data are used to compare how similar currently circulating influenza viruses are to the reference viruses used for developing new influenza vaccines and to monitor evolutionary changes that continually occur in influenza viruses circulating in humans. Antigenic and genetic characterization of circulating influenza viruses gives an indication of the influenza vaccine's ability to induce an immune response against the wide array of influenza viruses that are co-circulating every season. However, annual vaccine effectiveness estimates are needed to determine how much protection was provided to the population by vaccination.

For nearly all influenza-positive surveillance samples received at CDC, next-generation sequencing is performed to determine the genetic identity of circulating influenza viruses and to monitor the evolutionary trajectory of viruses circulating in our population. Virus gene segments are classified into genetic clades/subclades based on phylogenetic analysis. However, genetic changes that classify the clades/subclades do not always result in antigenic changes. “Antigenic drift” is a term used to describe gradual antigenic change that occurs as viruses evolve to escape host immune pressure. Antigenic drift is evaluated by comparing antigenic properties of cell-propagated reference viruses representing currently recommended vaccine components with those of cell-propagated circulating viruses.

CDC has antigenically or genetically characterized 444 influenza viruses collected September 30, 2018 – January 5, 2019, and submitted by U.S. laboratories, including 270 influenza A(H1N1)pdm09 viruses, 127 influenza A(H3N2) viruses, and 47 influenza B viruses.

Influenza A Viruses

- **A (H1N1)pdm09:** Phylogenetic analysis of the HA genes from 270 A(H1N1)pdm09 viruses showed that all belonged to clade 6B.1. Seventy-nine A(H1N1)pdm09 viruses were antigenically characterized, and 78 (98.7%) were antigenically similar (analyzed using HI with ferret antisera) to A/Michigan/45/2015 (6B.1), a cell-propagated A/Michigan/45/2015-like reference virus representing the A(H1N1)pdm09 component for the 2018-19 Northern Hemisphere influenza vaccines.

- **A (H3N2):** Phylogenetic analysis of the HA genes from 127 A(H3N2) viruses revealed extensive genetic diversity with multiple clades/subclades co-circulating. The HA genes of circulating viruses belonged to clade 3C.2a (n=43), subclade 3C.2a1 (n=61) or clade 3C.3a (n=23). Six A(H3N2) viruses were antigenically characterized by FRA with ferret antisera, and all 6 (100%) A(H3N2) viruses tested were well-inhibited (reacting at titers that were within 4-fold of the homologous virus titer) by ferret antisera raised against A/Singapore/INFIMH-16-0019/2016 (3C.2a1), a cell-propagated A/Singapore/INFIMH-16-0019/2016-like reference virus representing the A(H3N2) component of 2018-19 Northern Hemisphere influenza vaccines.

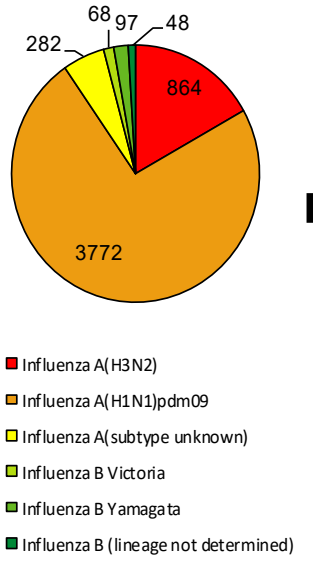
Influenza B Viruses

- **B/Victoria:** Phylogenetic analysis of 13 B/Victoria-lineage viruses indicate that all HA genes belonged to genetic clade V1A, however genetic subclades which are antigenically distinct have emerged. Genetic subclades which are antigenically distinct include viruses with a two amino acid deletion (162-163) in the HA protein (V1A.1, previously abbreviated as V1A-2Del) and viruses with a three amino acid deletion (162-164) in the HA protein (abbreviated as V1A-3Del). Eight B/Victoria lineage viruses were antigenically characterized and 4 (50%) were antigenically similar with ferret antisera raised against cell-propagated B/Colorado/06/2017-like V1A.1 reference virus. Four (50%) reacted poorly (at titers that were 8-fold or greater reduced compared with the homologous virus titer) and belonged to clade V1A.

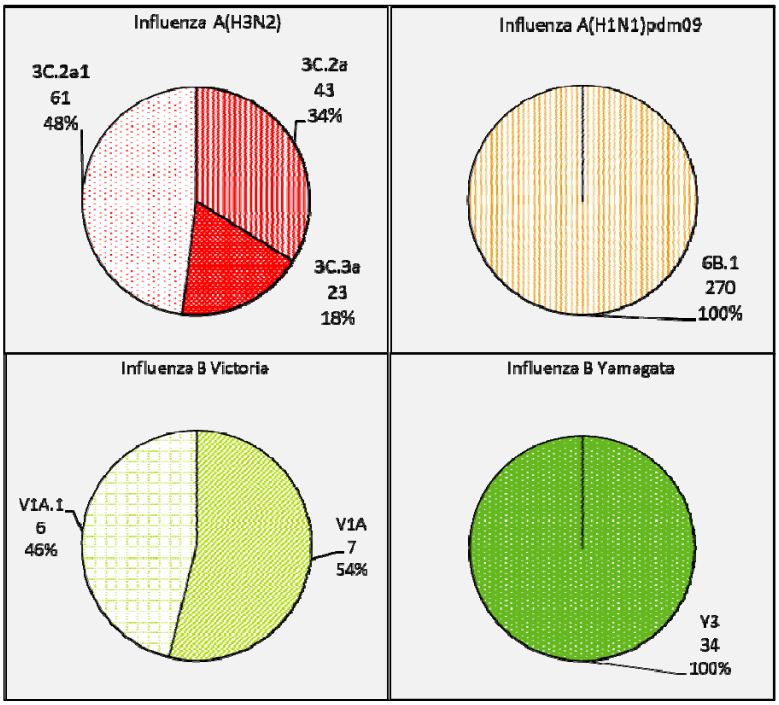
- **B/Yamagata:** Phylogenetic analysis of 34 influenza B/Yamagata-lineage viruses indicate that the HA genes belonged to clade Y3. A total of 33 influenza B/Yamagata-lineage viruses were antigenically characterized, and all were antigenically similar to cell-propagated B/Phuket/3073/2013 (Y3), the reference vaccine virus representing the influenza B/Yamagata-lineage component of the 2018-19 Northern Hemisphere quadrivalent vaccines.

The majority of U.S. viruses submitted for characterization come from state and local public health laboratories. Due to Right Size Roadmap considerations, specimen submission guidance to laboratories is that, if available, 2 influenza A(H1N1)pdm09, 2 influenza A(H3N2), and 2 influenza B viruses from each lineage be submitted every other week. Therefore, the numbers of each virus type/subtype characterized should be more balanced across subtypes/lineages but will not reflect the actual proportion of circulating viruses. In the figure below, the results of tests performed by public health labs are shown on the left and CDC sequence results (by genetic clade/subclade) are shown on the right.

Influenza Positive Specimens Reported by U.S. Public Health Laboratories, Cumulative, 2018-2019 Season



Sequence Results, by Genetic HA Clade/Subclade, of Specimens Submitted to CDC by U.S. Public Health Laboratories, Cumulative, 2018-2019 Season



Antiviral Resistance: Testing of influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses for resistance to the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir) is performed at CDC using next-generation sequencing analysis and/or a functional assay. Neuraminidase sequences of viruses are inspected to detect the presence of amino acid substitutions, previously associated with reduced or highly reduced inhibition by any of three neuraminidase inhibitors. In addition, a subset of viruses are tested using the neuraminidase inhibition assay with three neuraminidase inhibitors. The level of neuraminidase activity inhibition is reported using the thresholds recommended by the World Health Organization Expert Working Group of the Global Influenza Surveillance and Response System (GISRS). These samples are routinely obtained for surveillance purposes rather than for diagnostic testing of patients suspected to be infected with an antiviral-resistant virus.

Reporting of baloxavir susceptibility testing for the 2018-2019 influenza season will begin later this season. More information regarding influenza antiviral drug resistance can be found here.

High levels of resistance to the adamantanes (amantadine and rimantadine) persist among influenza A(H1N1)pdm09 and influenza A(H3N2) viruses (the adamantanes are not effective against influenza B viruses). Therefore, data from adamantane resistance testing are not presented below.

Assessment of Virus Susceptibility to Neuraminidase Inhibitors Using Next-Generation Sequencing Analysis and/or Neuraminidase Inhibition Assay

Type/Subtype or Lineage	Inhibition of Neuraminidase Activity by Antiviral Drug								
	Oseltamivir			Peramivir			Zanamivir		
	Virus Tested (n)	Reduced, Number (%)	Highly Reduced, Number (%)	Virus Tested (n)	Reduced, Number (%)	Highly Reduced, Number (%)	Virus Tested (n)	Reduced, Number (%)	Highly Reduced, Number (%)
Total Viruses	496	0 (0%)	0 (0%)	496	0 (0%)	0 (0%)	496	0 (0%)	0 (0%)
A(H1N1)pdm09	302	0 (0%)	0 (0%)	302	0 (0%)	0 (0%)	302	0 (0%)	0 (0%)
A(H3N2)	141	0 (0%)	0 (0%)	141	0 (0%)	0 (0%)	141	0 (0%)	0 (0%)
B/Victoria	15	0 (0%)	0 (0%)	15	0 (0%)	0 (0%)	15	0 (0%)	0 (0%)
B/Yamagata	38	0 (0%)	0 (0%)	38	0 (0%)	0 (0%)	38	0 (0%)	0 (0%)

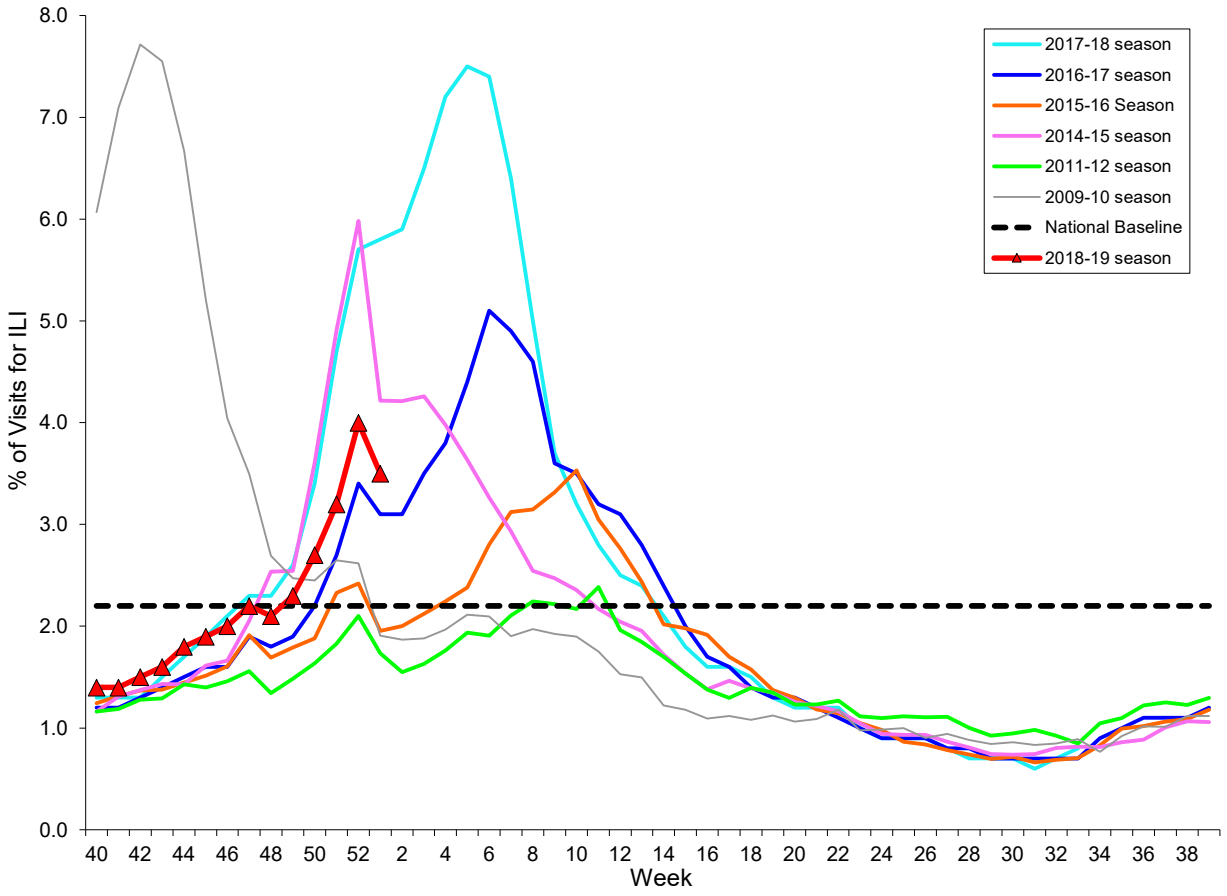
Antiviral treatment as early as possible is recommended for patients with confirmed or suspected influenza who have severe, complicated, or progressive illness; who require hospitalization; or who are at high risk for serious influenza-related complications. Additional information on recommendations for treatment and chemoprophylaxis of influenza virus infection with antiviral agents is available at: http://www.cdc.gov/flu/antivirals/index.htm.

Outpatient Illness Surveillance: Nationwide during week 1, 3.5% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI). This percentage is above the national baseline of 2.2%. *(ILI is defined as fever (temperature of 100°F [37.8°C] or greater) and cough and/or sore throat.)*

On a regional level, the percentage of outpatient visits for ILI ranged from 1.7% to 4.9% during week 1. All 10 regions reported a percentage of outpatient visits for ILI at or above their region-specific baseline.

Additional data on medically attended visits for ILI for current and past seasons and by geography (national, HHS region, or select states) are available on FluView Interactive (https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html).

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2018-2019 and Selected Previous Seasons



ILINet State Activity Indicator Map: Data collected in ILINet are used to produce a measure of ILI activity* by state. Activity levels are based on the percent of outpatient visits in a state due to ILI and are compared to the average percent of ILI visits that occur during weeks with little or no influenza virus circulation. Activity levels range from minimal, which would correspond to ILI activity from outpatient clinics being below, or only slightly above the average, to high, which would correspond to ILI activity from outpatient clinics being much higher than average.

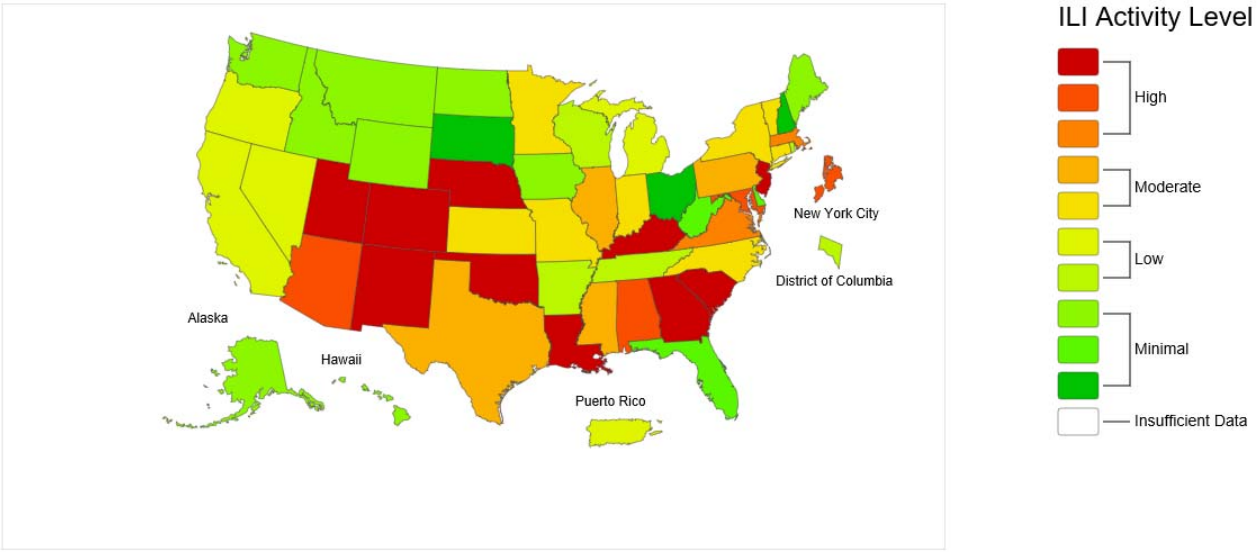
The ILI Activity Indicator Map displays state-specific activity levels for multiple seasons and allows a visual representation of relative activity from state to state. More information is available on FluView Interactive at https://gis.cdc.gov/grasp/fluview/main.html.

During week 1, the following ILI activity levels were experienced:

- New York City and 15 states (Alabama, Arizona, Colorado, Georgia, Kentucky, Louisiana, Maryland, Massachusetts, Nebraska, New Jersey, New Mexico, Oklahoma, South Carolina, Utah, and Virginia) experienced high ILI activity.
- 12 states (Connecticut, Illinois, Indiana, Kansas, Minnesota, Mississippi, Missouri, New York, North Carolina, Pennsylvania, Texas, and Vermont) experienced moderate ILI activity.
- The District of Columbia, Puerto Rico and 8 states (Arkansas, California, Michigan, Nevada, Oregon, Rhode Island, Tennessee and Wisconsin) experienced low ILI activity.
- 15 states (Alaska, Delaware, Florida, Hawaii, Idaho, Iowa, Maine, Montana, New Hampshire, North Dakota, Ohio, South Dakota, Washington, West Virginia, and Wyoming) experienced minimal ILI activity.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet

2018-19 Influenza Season Week 1 ending Jan 05, 2019

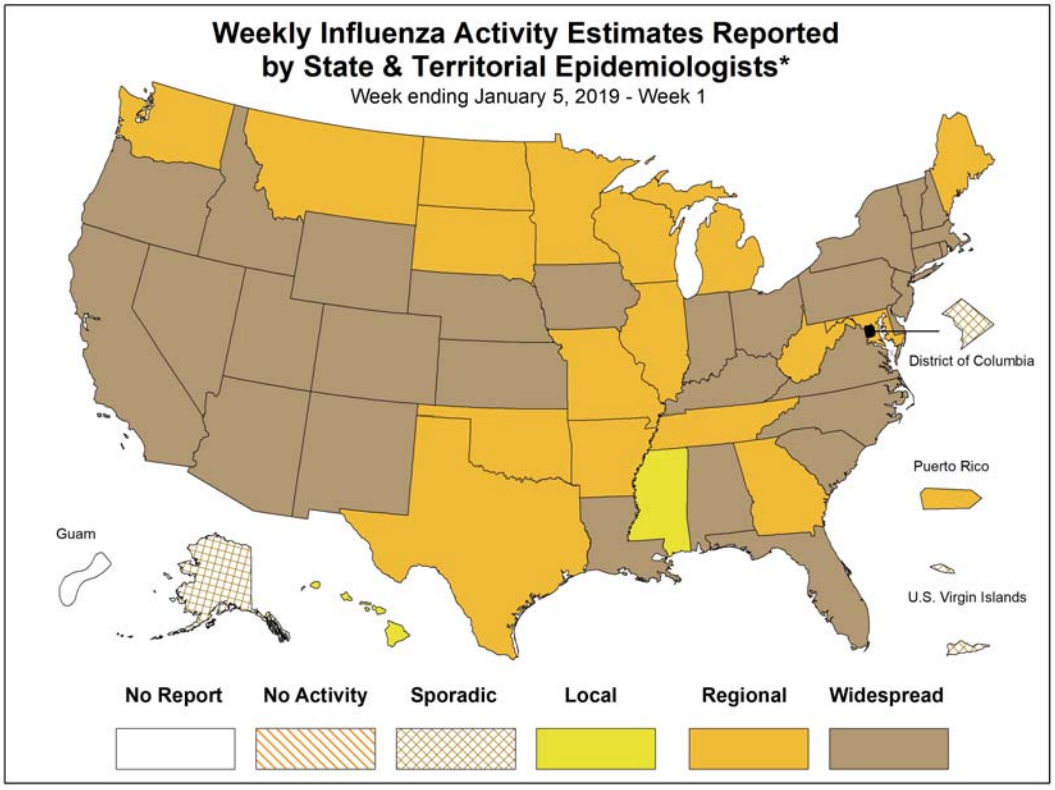


*This map uses the proportion of outpatient visits to health care providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.
Data collected in ILINet may disproportionally represent certain populations within a state, and therefore, may not accurately depict the full picture of influenza activity for the whole state.
Data displayed in this map are based on data collected in ILINet, whereas the State and Territorial flu activity map is based on reports from state and territorial epidemiologists. The data presented in this map is preliminary and may change as more data are received. Differences in the data presented here by CDC and independently by some state health departments likely represent differing levels of data completeness with data presented by the state likely being the more complete.

Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists: The influenza activity reported by state and territorial epidemiologists indicates geographic spread of influenza viruses, but does not measure the severity of influenza activity. Additional data displaying the influenza activity reported by state and territorial epidemiologists for the current and past seasons are available on FluView Interactive at https://gis.cdc.gov/grasp/fluview/FluView8.html.

During week 1, the following influenza activity was reported:

- Widespread influenza activity was reported by 30 states (Alabama, Arizona, California, Colorado, Connecticut, Delaware, Florida, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Massachusetts, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, Utah, Vermont, Virginia, and Wyoming).
- Regional influenza activity was reported by Puerto Rico and 17 states (Arkansas, Georgia, Illinois, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, North Dakota, Oklahoma, South Dakota, Tennessee, Texas, Washington, West Virginia, and Wisconsin).
- Local influenza activity was reported by two states (Hawaii and Mississippi).
- Sporadic influenza activity was reported by the District of Columbia, the U.S. Virgin Islands and one state (Alaska).
- Guam did not report.



* This map indicates geographic spread & does not measure the severity of influenza activity

Influenza-Associated Hospitalizations: The Influenza Hospitalization Surveillance Network (FluSurv-NET) conducts population-based surveillance for laboratory-confirmed influenza-related hospitalizations in select counties in the Emerging Infections Program (EIP) states and Influenza Hospitalization Surveillance Project (IHSP) states.

A total of 2,616 laboratory-confirmed influenza-associated hospitalizations were reported by FluSurv-NET sites between October 1, 2018 and January 5, 2019. The overall hospitalization rate was 9.1 per 100,000 population. The highest rate of hospitalization was among adults aged ≥65 (22.9 per 100,000 population), followed by children aged 0-4 (19.1 per 100,000 population) and adults aged 50-64 (11.5 per 100,000 population). Among 2,616 hospitalizations, 2,400 (91.7%) were associated with influenza A virus, 178 (6.8%) with influenza B virus, 20 (0.8%) with influenza A virus and influenza B virus co-infection, and 18 (0.7%) with influenza virus for which the type was not determined. Among those with influenza A subtype information, 426 (76.3%) were A(H1N1)pdm09 virus and 132 (23.7%) were A(H3N2).

Among 240 hospitalized adults with information on underlying medical conditions, 217 (90.4%) had at least one reported underlying medical condition, the most commonly reported were obesity, metabolic disorder and cardiovascular disease. Among 74 hospitalized children with information on underlying medical conditions, 26 (35.1%) had at least one underlying medical condition; the most commonly reported were asthma and obesity. Among 46 hospitalized women of childbearing age (15-44 years) with information on pregnancy status, 6 (25.0%) were pregnant.

Additional FluSurv-NET data displaying hospitalization rates for the current and past seasons and different age groups, as well as data on patient characteristics (such as influenza virus type, demographic, and clinical information), are available on FluView Interactive at: http://gis.cdc.gov/GRASP/Fluview/FluHospRates.html and http://gis.cdc.gov/grasp/fluview/FluHospChars.html.

FluSurv-Net data is used to generate national estimates of the total numbers of flu cases, medical visits, and hospitalizations. This season, CDC is reporting preliminary cumulative in-season estimates, which are available at https://cdc.gov/flu/about/burden/preliminary-in-season-estimates.htm.
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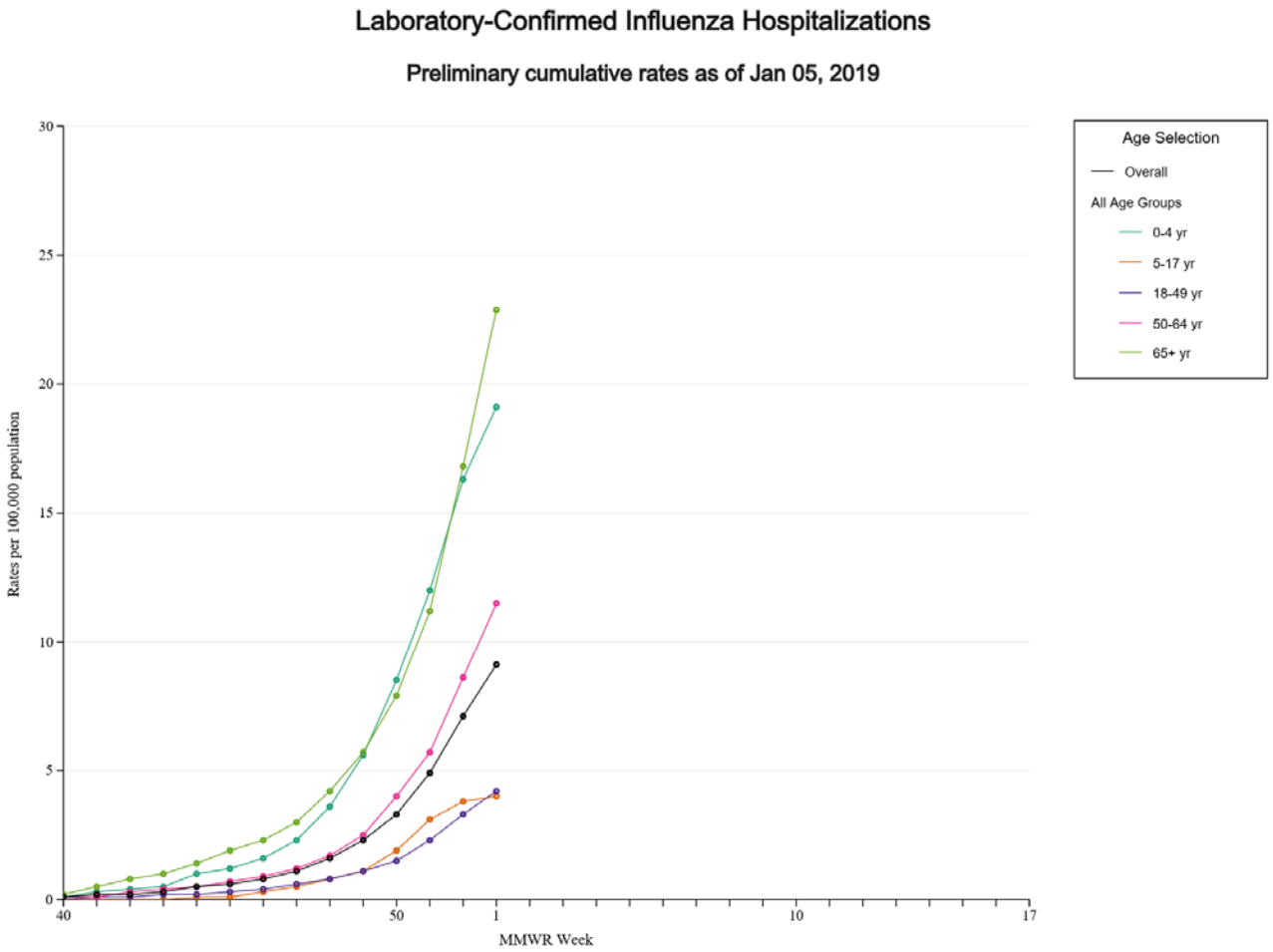
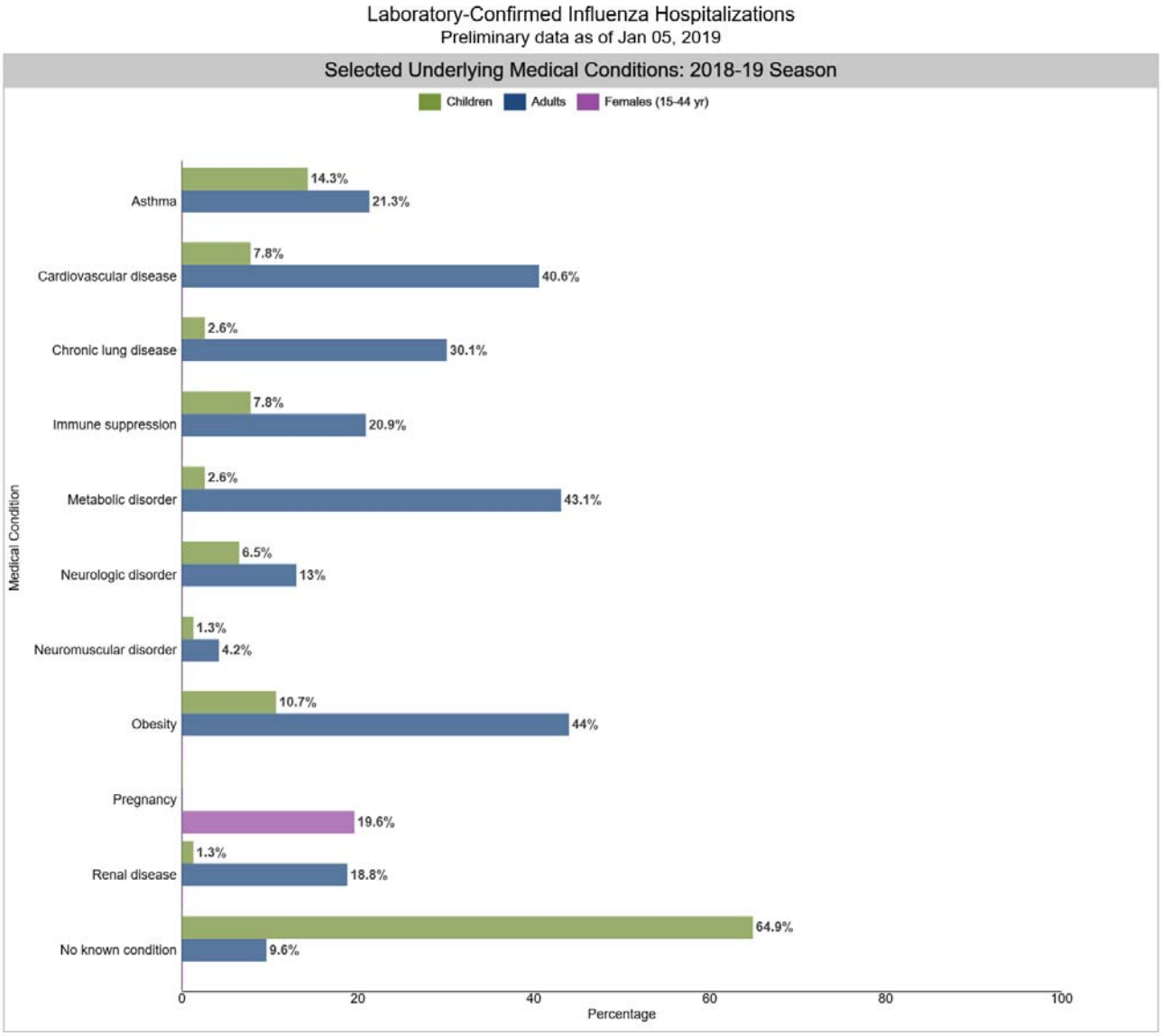


Data are from the Influenza Hospitalization Surveillance Network (FluSurv-NET), a population-based surveillance for influenza related hospitalizations in children and adults in 13 U.S. states. Incidence rates are calculated using the National Center for Health Statistics' (NCHS) population estimates for the counties included in the surveillance catchment area.

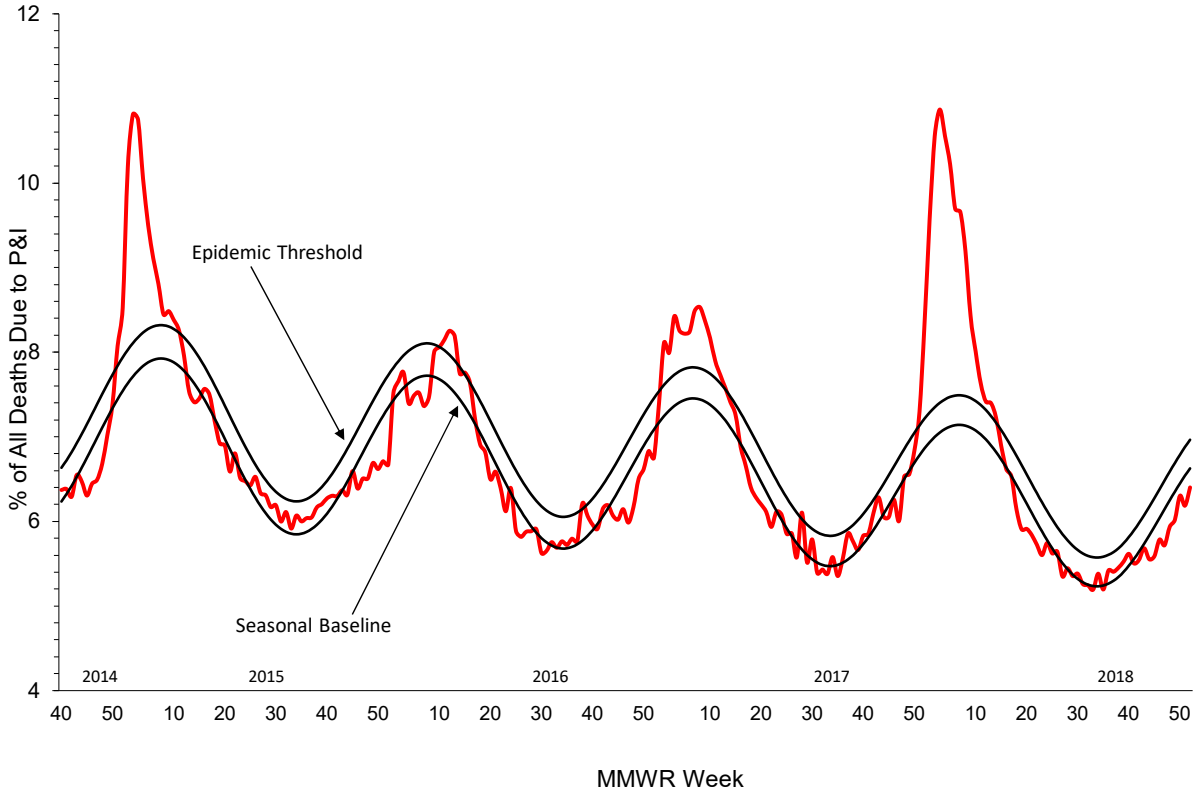


FluSurv-NET data are preliminary and displayed as they become available. Therefore, figures are based on varying denominators as some variables represent information that may require more time to be collected. Data are refreshed and updated weekly. Asthma includes a medical diagnosis of asthma or reactive airway disease; Cardiovascular diseases include conditions such as coronary heart disease, cardiac valve disorders, congestive heart failure, and pulmonary hypertension; does not include isolated hypertension; Chronic lung diseases include conditions such as chronic obstructive pulmonary disease, bronchiolitis obliterans, chronic aspiration pneumonia, and interstitial lung disease; Immune suppression includes conditions such as immunoglobulin deficiency, leukemia, lymphoma, HIV/AIDS, and individuals taking immunosuppressive medications; Metabolic disorders include conditions such as diabetes mellitus; Neurologic diseases include conditions such as seizure disorders, cerebral palsy, and cognitive dysfunction; Neuromuscular diseases include conditions such as multiple sclerosis and muscular dystrophy; Obesity was assigned if indicated in patient's medical chart or if body mass index (BMI) >30 kg/m^2; Pregnancy percentage calculated using number of influenza-positive females aged between 15 and 44 years of age as the denominator; Renal diseases include conditions such as acute or chronic renal failure, nephrotic syndrome, glomerulonephritis, and impaired creatinine clearance; No known condition indicates that the person did not have any known high risk medical condition indicated in medical chart at the time of hospitalization.

Pneumonia and Influenza (P&I) Mortality Surveillance: Based on National Center for Health Statistics (NCHS) mortality surveillance data available on January 10, 2019, 6.4% of the deaths occurring during the week ending December 29, 2018 (week 52) were due to P&I. This percentage is below the epidemic threshold of 7.0% for week 52.

Additional pneumonia and influenza mortality data for current and past seasons and by geography (national, HHS region, or state) are available at on FluView Interactive (https://gis.cdc.gov/grasp/fluview/mortality.html). Data displayed on the regional and state-level are aggregated by the state of residence of the decedent.

Pneumonia and Influenza Mortality from
the National Center for Health Statistics Mortality Surveillance System
Data through the week ending December 29, 2018, as of January 10, 2019

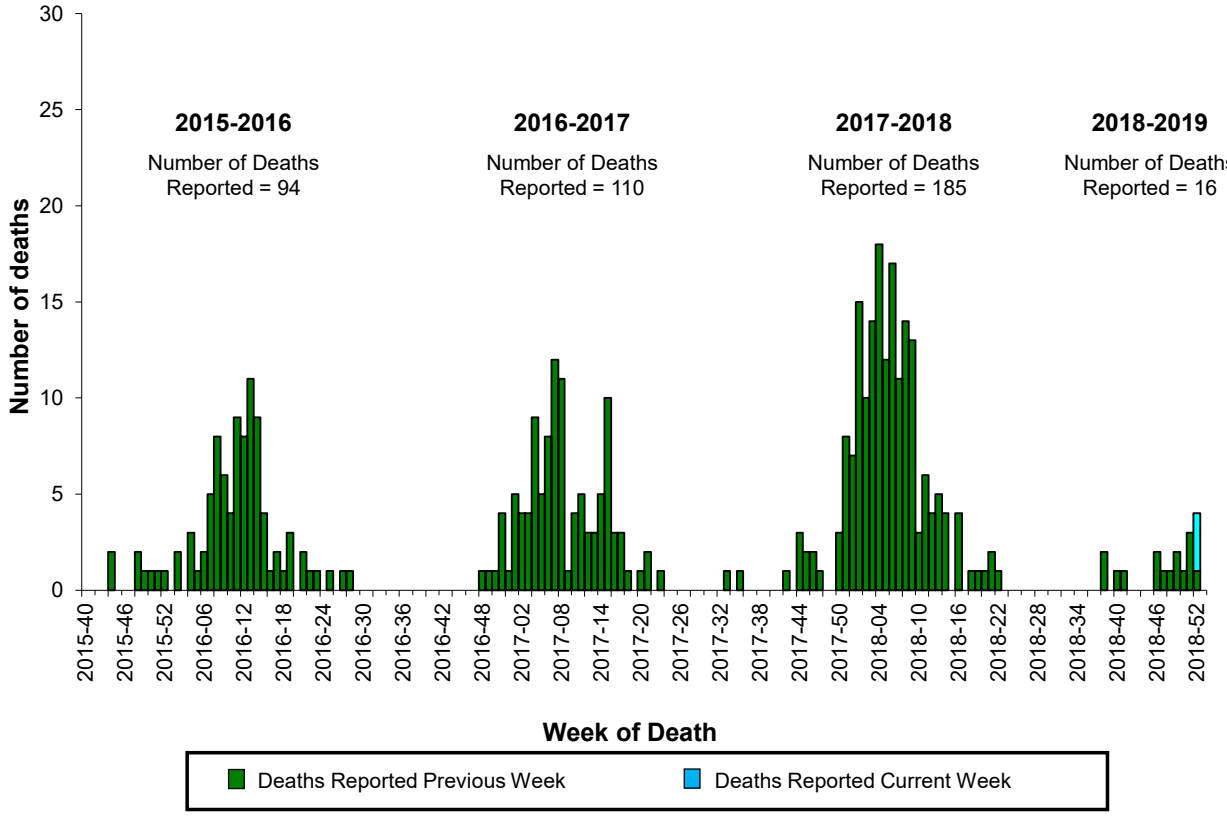


Influenza-Associated Pediatric Mortality: Three influenza-associated pediatric deaths were reported to CDC during week 1. One death was associated with an influenza A(H3) virus, one death was associated with an influenza A(H1N1)pdm09 virus and one death was associated with an influenza A virus for which no subtyping was performed. All three deaths occurred during week 52 (the week ending December 29, 2018).

A total of 16 influenza-associated pediatric deaths occurring during the 2018-2019 season have been reported to CDC.

Additional information on influenza-associated pediatric deaths including basic demographics, underlying conditions, bacterial co-infections, and place of death for the current and past seasons, is available on FluView Interactive (https://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html).

Number of Influenza-Associated Pediatric Deaths by Week of Death: 2015-2016 season to present



Additional National and International Influenza Surveillance Information is available at: https://www.cdc.gov/flu/weekly/#AddInfo

Report prepared: January 11, 2019.

WHO Collaborating Laboratory Reports
2018-2019 Influenza Season

National

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	79	771	7	29	11	0	0	7	11	236	16384	285	1.74	217	68
201841	78	882	7	52	10	0	5	3	5	236	17880	302	1.69	221	81
201842	85	1064	12	51	20	0	1	2	14	233	20022	399	1.99	311	88
201843	81	1066	3	74	35	0	3	0	13	230	21176	433	2.04	335	98
201844	83	1195	2	82	23	0	1	1	8	230	21785	466	2.14	375	91
201845	84	1278	14	117	27	0	5	4	6	228	22844	630	2.76	536	94
201846	86	1359	9	145	40	0	0	2	3	227	23364	746	3.19	651	95
201847	82	1071	12	205	53	0	1	2	5	226	23901	944	3.95	876	68
201848	85	1634	13	305	63	0	1	2	10	225	26680	1040	3.90	955	85
201849	86	1596	17	329	85	0	6	3	8	226	27491	1744	6.34	1607	137
201850	83	1954	24	580	154	0	4	5	6	223	31085	3257	10.48	3090	167
201851	83	1941	92	746	149	0	12	18	4	220	36593	5206	14.23	5040	166
201852	78	1481	20	735	126	0	7	17	4	186	39291	6518	16.59	6306	212
201901	64	833	50	322	68	0	2	2	0	161	35059	4460	12.72	4347	113
Total	0	18125	282	3772	864	0	48	68	97	.	363555	26430	7.27	24867	1563

Region 1 (CT, ME, MA, NH, RI, VT)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	5	26	0	1	0	0	0	0	1	15	922	3	0.33	2	1
201841	6	30	0	1	3	0	0	0	0	15	971	4	0.41	2	2
201842	6	34	0	3	0	0	0	1	0	15	1110	2	0.18	2	0
201843	5	26	0	3	1	0	0	0	0	15	1152	16	1.39	12	4
201844	6	37	0	2	0	0	0	0	1	15	1279	24	1.88	19	5
201845	6	27	0	3	0	0	0	0	0	15	1268	25	1.97	25	0
201846	5	33	0	4	0	0	0	0	0	15	1234	18	1.46	14	4
201847	5	30	0	3	1	0	0	0	0	15	1256	24	1.91	24	0
201848	6	43	0	7	5	0	0	0	0	15	1551	42	2.71	39	3
201849	6	64	0	15	12	0	0	0	0	15	1568	77	4.91	72	5
201850	6	74	0	22	10	0	0	0	0	15	1748	141	8.07	136	5
201851	6	84	1	49	6	0	0	0	2	15	2194	265	12.08	264	1
201852	5	132	3	100	2	0	0	0	1	15	2731	470	17.21	465	5
201901	6	46	0	26	5	0	0	0	0	12	2772	445	16.05	444	1
Total	0	686	4	239	45	0	0	1	5	.	21756	1556	7.15	1520	36

Region 2 (NJ, NY, PR)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	4	41	0	5	0	0	0	0	0	12	1735	13	0.75	10	3
201841	5	36	0	7	0	0	0	0	0	13	2280	13	0.57	11	2

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201842	5	43	0	5	1	0	0	0	0	13	2394	7	0.29	7	0
201843	5	39	0	6	4	0	0	0	0	13	2511	14	0.56	11	3
201844	5	35	0	6	2	0	0	0	0	13	2438	14	0.57	12	2
201845	7	55	0	10	0	0	0	0	0	13	2456	26	1.06	25	1
201846	6	55	0	17	1	0	0	0	0	14	2492	33	1.32	32	1
201847	5	45	0	20	5	0	0	0	0	14	2563	44	1.72	40	4
201848	7	71	0	26	3	0	0	0	0	14	2977	82	2.75	75	7
201849	6	68	0	31	2	0	0	0	0	13	3198	119	3.72	108	11
201850	6	86	0	37	8	0	0	0	0	13	3579	217	6.06	207	10
201851	5	87	0	49	7	0	0	0	0	12	3727	307	8.24	303	4
201852	6	99	0	70	3	0	1	0	0	12	3944	527	13.36	519	8
201901	3	13	0	5	1	0	0	0	0	8	3920	528	13.47	525	3
Total	0	773	0	294	37	0	1	0	0	.	40214	1944	4.83	1885	59

Region 3 (DE, DC, MD, PA, VA, WV)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	7	153	0	1	2	0	0	7	0	19	1181	4	0.34	3	1
201841	7	175	0	5	1	0	1	2	0	19	1244	7	0.56	4	3
201842	7	261	1	5	0	0	0	0	2	19	1274	9	0.71	9	0
201843	7	219	0	9	2	0	0	0	0	18	1467	8	0.55	7	1
201844	8	250	0	7	4	0	1	0	0	18	1540	3	0.19	2	1
201845	7	306	0	16	1	0	1	1	1	18	1572	8	0.51	4	4
201846	7	281	0	23	4	0	0	0	0	18	1660	9	0.54	9	0
201847	7	240	0	32	3	0	0	1	0	18	1662	27	1.62	26	1
201848	8	321	1	37	7	0	0	0	2	18	1953	31	1.59	29	2
201849	7	348	1	39	9	0	2	1	1	18	1870	52	2.78	49	3
201850	7	413	0	66	20	0	1	1	1	17	1958	105	5.36	101	4
201851	8	363	5	114	9	0	2	12	0	18	2281	180	7.89	178	2
201852	7	288	2	111	23	0	0	11	1	16	1728	159	9.20	154	5
201901	7	209	5	80	17	0	0	1	0	13	1870	134	7.17	131	3
Total	0	3827	15	545	102	0	8	37	8	.	23260	736	3.16	706	30

Region 4 (AL, FL, GA, KY, MS, NC, SC, TN)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	9	76	0	5	0	0	0	0	1	40	3959	206	5.20	163	43
201841	9	87	0	9	0	0	0	0	2	39	3970	193	4.86	147	46
201842	9	127	0	4	3	0	0	0	9	40	4755	303	6.37	246	57
201843	9	135	1	7	4	0	0	0	9	39	5004	312	6.24	248	64
201844	12	161	0	11	4	0	0	1	2	35	4927	294	5.97	247	47
201845	11	171	1	7	11	0	0	0	0	36	5172	421	8.14	364	57
201846	11	198	0	15	14	0	0	0	2	35	5437	460	8.46	405	55
201847	11	129	1	11	16	0	0	0	2	36	5459	522	9.56	485	37
201848	12	256	0	30	21	0	0	0	4	35	5679	509	8.96	457	52

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201849	12	236	1	20	33	0	0	0	0	35	6123	808	13.20	732	76
201850	11	220	0	26	75	0	1	0	0	35	7389	1426	19.30	1334	92
201851	10	173	1	25	50	0	1	0	0	35	8368	2036	24.33	1950	86
201852	12	147	0	34	48	0	0	1	1	36	9329	2132	22.85	2027	105
201901	9	85	0	10	24	0	0	0	0	31	5999	796	13.27	753	43
Total	0	2201	5	214	303	0	2	2	32	.	81570	10418	12.77	9558	860

Region 5 (IL, IN, MI, MN, OH, WI)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	10	190	0	2	1	0	0	0	0	64	3208	13	0.41	7	6
201841	10	177	0	10	0	0	0	0	0	64	3570	20	0.56	14	6
201842	10	201	0	3	3	0	0	0	0	63	4024	15	0.37	10	5
201843	10	236	2	7	4	0	1	0	2	63	4246	29	0.68	21	8
201844	9	228	1	13	2	0	0	0	1	65	4370	42	0.96	36	6
201845	9	224	0	14	3	0	1	0	0	64	4518	59	1.31	49	10
201846	9	252	0	21	8	0	0	1	0	64	4850	92	1.90	80	12
201847	12	212	3	20	8	0	0	0	1	63	4657	93	2.00	85	8
201848	11	290	4	32	3	0	0	0	0	62	5392	131	2.43	125	6
201849	9	282	3	32	8	0	2	0	0	64	5583	193	3.46	181	12
201850	9	292	13	37	11	0	1	1	2	64	5952	326	5.48	305	21
201851	10	314	19	52	15	0	2	1	2	64	6687	638	9.54	613	25
201852	12	147	7	41	7	0	4	0	0	32	6747	967	14.33	952	15
201901	9	88	11	9	2	0	0	1	0	29	6706	779	11.62	768	11
Total	0	3133	63	293	75	0	11	4	8	.	70510	3397	4.82	3246	151

Region 6 (AR, LA, NM, OK, TX)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	9	62	0	2	0	0	0	0	0	25	1892	25	1.32	14	11
201841	7	76	0	1	0	0	0	1	0	25	2131	32	1.50	16	16
201842	9	94	0	1	0	0	0	0	0	25	2337	37	1.58	19	18
201843	8	121	0	9	2	0	1	0	0	24	2436	33	1.35	19	14
201844	9	120	0	8	4	0	0	0	0	24	2849	50	1.76	29	21
201845	8	144	0	16	3	0	0	1	0	24	3014	45	1.49	30	15
201846	8	120	0	9	2	0	0	0	0	23	3122	54	1.73	36	18
201847	7	61	0	8	4	0	0	0	1	23	3309	104	3.14	91	13
201848	8	167	0	19	8	0	0	0	1	23	3203	77	2.40	67	10
201849	8	113	0	29	4	0	0	0	0	23	2928	147	5.02	131	16
201850	8	194	1	79	6	0	0	1	1	22	3438	345	10.03	322	23
201851	9	123	0	65	3	0	0	0	0	23	5134	843	16.42	811	32
201852	8	24	0	0	7	0	1	1	0	22	4941	963	19.49	918	45
201901	5	25	0	4	4	0	0	0	0	20	4050	563	13.90	533	30
Total	0	1444	1	250	47	0	2	4	3	.	44784	3318	7.41	3036	282

Region 7 (IA, KS, MO, NE)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	4	35	0	1	0	0	0	0	1	17	942	3	0.32	3	0
201841	4	42	0	0	0	0	0	0	0	17	1011	0	0.00	0	0
201842	6	49	0	1	2	0	0	0	0	17	1144	3	0.26	3	0
201843	5	46	0	2	4	0	0	0	0	17	1202	3	0.25	3	0
201844	6	54	0	0	0	0	0	0	0	17	1238	0	0.00	0	0
201845	5	52	0	2	3	0	0	0	3	15	1298	5	0.39	5	0
201846	5	51	0	4	0	0	0	0	0	15	1037	21	2.03	21	0
201847	3	29	0	4	2	0	0	0	0	15	1331	35	2.63	35	0
201848	6	48	1	6	1	0	0	0	0	15	1622	30	1.85	30	0
201849	6	38	0	4	1	0	0	0	0	15	1692	58	3.43	55	3
201850	7	61	1	24	4	0	0	0	0	15	1843	143	7.76	142	1
201851	4	85	1	41	11	0	0	0	0	16	2348	223	9.50	223	0
201852	5	107	5	39	17	0	0	0	0	16	2847	321	11.28	319	2
201901	5	82	27	9	4	0	0	0	0	13	2614	265	10.14	264	1
Total	0	779	35	137	49	0	0	0	4	.	22169	1110	5.01	1103	7

Region 8 (CO, MT, ND, SD, UT, WY)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	7	42	1	4	4	0	0	0	5	14	998	5	0.50	4	1
201841	8	51	0	8	1	0	0	0	1	13	1044	7	0.67	7	0
201842	7	42	0	8	0	0	0	0	0	13	1161	4	0.34	4	0
201843	6	65	0	19	2	0	0	0	0	13	1262	5	0.40	4	1
201844	7	83	0	9	1	0	0	0	2	13	1290	12	0.93	8	4
201845	5	58	0	15	0	0	0	0	0	13	1351	13	0.96	12	1
201846	7	49	0	12	2	0	0	0	0	13	1347	24	1.78	23	1
201847	7	36	0	7	1	0	0	1	0	13	1358	28	2.06	25	3
201848	9	82	0	23	2	0	0	2	1	13	1598	44	2.75	44	0
201849	7	92	0	38	5	0	2	2	1	13	1603	94	5.86	89	5
201850	8	137	0	65	5	0	0	2	2	13	1814	194	10.69	188	6
201851	9	191	0	116	13	0	0	5	0	14	2291	315	13.75	306	9
201852	9	186	0	104	12	0	0	3	0	14	2953	485	16.42	470	15
201901	6	76	0	52	5	0	0	0	0	13	3149	471	14.96	462	9
Total	0	1190	1	480	53	0	2	15	12	.	23219	1701	7.33	1646	55

Region 9 (AZ, CA, GU, HI, NV)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	31	105	6	5	4	0	0	0	2	14	669	5	0.75	4	1
201841	29	144	7	9	2	0	4	0	2	13	697	10	1.43	9	1
201842	32	156	11	13	11	0	1	1	3	13	777	10	1.29	5	5
201843	30	118	0	10	8	0	1	0	2	13	812	4	0.49	4	0
201844	30	139	1	21	4	0	0	0	2	14	908	17	1.87	14	3
201845	32	168	13	30	3	0	3	2	2	14	973	16	1.64	14	2

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201846	32	230	9	35	8	0	0	0	1	15	994	18	1.81	18	0
201847	34	217	8	97	11	0	1	0	1	15	989	39	3.94	38	1
201848	31	296	6	111	13	0	1	0	2	14	1196	72	6.02	69	3
201849	32	295	11	111	10	0	0	0	5	14	1404	153	10.90	148	5
201850	33	342	9	175	13	0	1	0	0	14	1735	289	16.66	284	5
201851	32	412	65	181	28	0	6	0	0	14	1827	278	15.22	272	6
201852	32	257	3	182	4	0	1	1	1	15	1941	296	15.25	287	9
201901	26	188	7	113	4	0	2	0	0	13	1586	226	14.25	220	6
Total	0	3067	156	1093	123	0	21	4	23	.	16508	1433	8.68	1386	47

Region 10 (AK, ID, OR, WA)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	5	41	0	3	0	0	0	0	1	18	878	8	0.91	7	1
201841	6	64	0	2	3	0	0	0	0	18	962	16	1.66	11	5
201842	7	57	0	8	0	0	0	0	0	17	1046	9	0.86	6	3
201843	6	61	0	2	4	0	0	0	0	16	1084	9	0.83	6	3
201844	5	88	0	5	2	0	0	0	0	17	946	10	1.06	8	2
201845	6	73	0	4	3	0	0	0	0	18	1222	12	0.98	8	4
201846	6	90	0	5	1	0	0	1	0	17	1191	17	1.43	13	4
201847	6	72	0	3	2	0	0	0	0	17	1317	28	2.13	27	1
201848	6	60	1	14	0	0	0	0	0	16	1509	22	1.46	20	2
201849	6	60	1	10	1	0	0	0	1	16	1522	43	2.83	42	1
201850	6	135	0	49	2	0	0	0	0	15	1629	71	4.36	71	0
201851	6	109	0	54	7	0	1	0	0	14	1736	121	6.97	120	1
201852	5	94	0	54	3	0	0	0	0	15	2130	198	9.30	195	3
201901	3	21	0	14	2	0	0	0	0	15	2393	253	10.57	247	6
Total	0	1025	2	227	30	0	1	1	2	.	19565	817	4.18	781	36

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
National (Baseline: 2.2%)
Data as of Friday, January 11, 2019

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	2586	4911	6283	3889	1564	1304	17951	1263123	1.4	1.4
201841	2623	5336	6233	4049	1677	1329	18624	1262634	1.5	1.4
201842	2596	5548	6678	4405	1759	1401	19791	1246633	1.6	1.5
201843	2652	6225	7397	4581	1861	1446	21510	1248507	1.7	1.6
201844	2631	6797	8085	4700	1855	1452	22889	1246109	1.8	1.8
201845	2634	7409	8295	4804	1888	1449	23845	1240052	1.9	1.9
201846	2624	7784	7973	5044	2029	1489	24319	1163691	2.1	2.0
201847	2576	8523	7121	5000	2142	1705	24491	1018288	2.4	2.2
201848	2611	8720	8561	6556	2817	2075	28729	1277722	2.2	2.1
201849	2589	8610	9012	5960	2525	1876	27983	1209665	2.3	2.3
201850	2556	9962	11056	6808	2825	1917	32568	1180778	2.8	2.7
201851	2403	10941	12186	7694	3214	2359	36394	1121858	3.2	3.2
201852	2387	13057	11566	10106	4409	3402	42540	1015231	4.2	4.0
201901	2206	11002	8855	10504	4819	3920	39100	1057075	3.7	3.5
Totals							*380734*	*16551366*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 1 (CT, ME, MA, NH, RI, and VT) (Baseline: 1.8%)
Data as of Friday, January 11, 2019

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	172	172	292	165	89	67	785	83511	0.9	1.0
201841	175	167	332	198	96	81	874	83577	1.0	1.1
201842	175	183	326	202	93	89	893	82083	1.1	1.1
201843	177	209	340	188	103	62	902	81029	1.1	1.2
201844	175	164	347	184	82	43	820	79634	1.0	1.1
201845	175	216	342	191	75	62	886	79659	1.1	1.2
201846	177	248	305	179	86	51	869	79087	1.1	1.1
201847	179	260	297	194	88	73	912	64633	1.4	1.5
201848	180	228	359	261	114	74	1036	83394	1.2	1.4
201849	179	293	449	275	108	74	1199	83010	1.4	1.8

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201850	177	326	413	304	130	100	1273	79064	1.6	1.9
201851	172	432	486	335	169	118	1540	74870	2.1	2.4
201852	172	506	500	527	236	189	1958	64113	3.1	3.3
201901	167	425	531	634	321	237	2148	72192	3.0	3.3
Totals							*16095*	*1089856*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 2 (NJ, NY, PR, and USVI) (Baseline: 3.1%)
Data as of Friday, January 11, 2019

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	258	1086	1190	770	366	329	3741	206718	1.8	2.3
201841	262	1217	1104	735	404	323	3783	211284	1.8	2.3
201842	260	1294	1232	747	389	325	3987	201399	2.0	2.5
201843	261	1486	1350	732	341	297	4206	195601	2.2	2.6
201844	258	1545	1311	644	299	287	4086	198070	2.1	2.5
201845	261	1622	1239	635	325	231	4052	198086	2.0	2.6
201846	265	1753	1163	665	341	244	4166	186996	2.2	2.8
201847	264	1821	1230	702	344	273	4370	176080	2.5	3.1
201848	263	1778	1266	873	378	308	4603	197494	2.3	2.8
201849	256	2013	1469	827	351	310	4970	193106	2.6	3.3
201850	253	2147	1852	1031	442	325	5797	192576	3.0	3.7
201851	247	2328	2261	1212	484	396	6681	187064	3.6	4.4
201852	240	2772	2253	1667	741	542	7975	181724	4.4	5.0
201901	238	2413	1690	1869	910	713	7595	189256	4.0	4.7
Totals							*70012*	*2715454*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 3 (DE, DC, MD, PA, VA, and WV) (Baseline: 2.0%)
Data as of Friday, January 11, 2019

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	352	615	874	554	183	161	2387	187888	1.3	1.0

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201841	355	672	943	612	217	155	2599	189302	1.4	1.1
201842	353	721	1017	686	233	179	2836	182777	1.6	1.3
201843	360	760	961	652	243	172	2788	182724	1.5	1.3
201844	355	832	1168	702	259	160	3121	184293	1.7	1.5
201845	344	908	1116	684	258	190	3156	176481	1.8	1.6
201846	333	891	1063	714	254	213	3135	162829	1.9	1.6
201847	335	1078	947	677	245	222	3169	142859	2.2	1.8
201848	342	1154	1098	955	365	300	3872	197764	2.0	1.7
201849	340	1062	1062	807	321	213	3465	166165	2.1	1.7
201850	331	1233	1238	917	359	201	3948	162485	2.4	2.1
201851	328	1367	1433	1053	380	281	4514	170429	2.6	2.5
201852	327	1472	1200	1159	505	326	4662	141149	3.3	3.2
201901	315	1460	1177	1550	674	506	5367	164207	3.3	3.3
Totals							*49019*	*2411352*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 4 (AL, FL, GA, KY, MS, NC, SC, and TN) (Baseline: 2.2%)
Data as of Friday, January 11, 2019

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	543	1428	1527	951	267	195	4368	298235	1.5	1.3
201841	546	1525	1459	1000	329	232	4545	288359	1.6	1.4
201842	553	1548	1633	1130	383	235	4929	293084	1.7	1.4
201843	567	1761	2014	1316	465	315	5871	294676	2.0	1.7
201844	553	1967	2243	1396	424	297	6327	292033	2.2	1.8
201845	552	2138	2314	1475	450	285	6662	288124	2.3	1.9
201846	556	2133	2330	1557	504	305	6829	266121	2.6	2.0
201847	554	2557	2031	1523	563	342	7016	243104	2.9	2.3
201848	554	2485	2528	1991	716	448	8168	301268	2.7	2.2
201849	547	2308	2549	1822	625	412	7716	286561	2.7	2.3
201850	539	2791	3336	1987	724	444	9282	276388	3.4	2.7
201851	515	3094	3923	2471	873	585	10946	277292	3.9	3.2
201852	519	3811	3694	3239	1259	1007	13010	268847	4.8	4.1
201901	499	2973	2523	3208	1286	1090	11080	281697	3.9	3.3

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
Totals							*106749*	*3955789*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 5 (IL, IN, MI, MN, OH, and WI) (Baseline: 1.8%)
Data as of Friday, January 11, 2019

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	320	289	491	247	122	80	1229	126435	1.0	1.0
201841	322	306	593	268	128	83	1378	126233	1.1	1.1
201842	325	327	526	281	141	110	1385	128925	1.1	1.0
201843	327	408	559	299	159	125	1550	131319	1.2	1.2
201844	326	444	685	325	128	124	1706	129788	1.3	1.3
201845	323	458	659	278	119	146	1660	130065	1.3	1.3
201846	321	468	559	324	137	111	1599	119158	1.3	1.3
201847	277	431	424	267	121	114	1357	89142	1.5	1.5
201848	312	551	607	370	160	164	1852	126835	1.5	1.5
201849	318	562	640	339	150	151	1842	127415	1.4	1.5
201850	314	663	713	356	168	152	2052	123163	1.7	1.7
201851	296	739	671	383	197	188	2178	104611	2.1	2.3
201852	295	854	606	472	248	258	2438	86234	2.8	3.1
201901	201	636	385	449	224	263	1957	77828	2.5	2.6
Totals							*24183*	*1627151*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 6 (AR, LA, NM, OK, and TX) (Baseline: 4.0%)
Data as of Friday, January 11, 2019

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	286	700	837	451	198	137	2323	110747	2.1	2.3
201841	289	716	676	552	195	103	2242	111578	2.0	2.0
201842	290	741	787	536	184	138	2386	105619	2.3	2.2
201843	290	853	959	637	205	140	2794	109757	2.5	2.5
201844	287	1012	969	661	215	155	3012	108551	2.8	2.8

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201845	292	1067	1117	696	224	164	3268	109255	3.0	3.0
201846	292	1276	1107	739	275	190	3587	105968	3.4	3.4
201847	287	1333	916	790	324	206	3569	93345	3.8	3.7
201848	289	1361	1101	929	416	256	4063	114168	3.6	3.4
201849	288	1206	1079	769	307	203	3564	107266	3.3	3.4
201850	284	1309	1303	828	283	193	3916	107339	3.6	3.9
201851	271	1437	1429	1013	412	267	4558	103354	4.4	4.6
201852	261	1764	1495	1422	560	406	5647	96145	5.9	6.0
201901	264	1426	1117	1458	626	405	5032	101098	5.0	4.9
Totals							*49961*	*1484190*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 7 (IA, KS, MO, and NE) (Baseline: 1.6%)
Data as of Friday, January 11, 2019

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	114	77	114	41	14	19	265	28398	0.9	0.8
201841	117	110	163	57	19	28	377	32724	1.2	0.9
201842	85	58	98	55	18	16	245	27269	0.9	0.9
201843	116	117	177	70	25	21	410	32900	1.2	1.1
201844	118	125	186	54	34	20	419	30785	1.4	1.4
201845	118	143	190	64	19	21	437	30803	1.4	1.3
201846	119	137	185	57	25	21	425	31487	1.3	1.0
201847	121	150	169	66	34	30	449	25542	1.8	1.4
201848	113	154	183	66	39	33	475	29544	1.6	1.4
201849	114	145	172	66	35	31	449	30623	1.5	1.5
201850	114	201	284	76	28	36	625	28892	2.2	2.3
201851	107	290	284	93	38	54	759	26968	2.8	2.6
201852	107	371	359	144	89	79	1042	22287	4.7	4.8
201901	102	449	312	165	91	80	1097	24724	4.4	3.9
Totals							*7474*	*402946*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 8 (CO, MT, ND, SD, UT, and WY) (Baseline: 2.2%)
Data as of Friday, January 11, 2019

CDC Week	*# Sites Reporting*	*ILI 0-4 years*	*ILI 5-24 years*	*ILI 25-49 years*	*ILI 50-64 years*	*ILI 65 years and older*	*Total ILI*	*Total Patient Visits*	*% Unweighted ILI*	*% Weighted ILI*
201840	219	293	460	376	145	118	1392	93763	1.5	1.5
201841	225	335	493	311	136	134	1409	90188	1.6	1.6
201842	225	402	514	429	135	139	1619	94955	1.7	1.8
201843	228	372	497	371	167	135	1542	94367	1.6	1.7
201844	229	368	535	396	179	168	1646	93044	1.8	1.8
201845	230	448	632	426	166	146	1818	94444	1.9	2.0
201846	227	433	573	423	175	129	1733	88494	2.0	2.2
201847	226	476	532	397	163	141	1709	78026	2.2	2.3
201848	228	533	646	562	266	197	2204	94867	2.3	2.5
201849	223	543	710	552	283	201	2289	91479	2.5	2.7
201850	225	716	979	756	330	232	3013	90280	3.3	3.5
201851	189	661	789	612	286	219	2567	72776	3.5	4.6
201852	198	892	846	1005	457	327	3527	69876	5.0	5.2
201901	160	630	587	611	337	265	2430	58282	4.2	4.7
Totals							*28898*	*1204841*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 9 (AZ, CA, HI, and NV) (Baseline: 2.3%)
Data as of Friday, January 11, 2019

CDC Week	*# Sites Reporting*	*ILI 0-4 years*	*ILI 5-24 years*	*ILI 25-49 years*	*ILI 50-64 years*	*ILI 65 years and older*	*Total ILI*	*Total Patient Visits*	*% Unweighted ILI*	*% Weighted ILI*
201840	194	176	374	224	149	167	1090	81446	1.3	1.4
201841	199	176	337	205	120	148	986	80386	1.2	1.3
201842	196	183	408	221	148	130	1090	82650	1.3	1.4
201843	195	185	416	216	117	131	1065	78927	1.3	1.4
201844	202	230	492	239	192	160	1313	84078	1.6	1.6
201845	208	268	518	242	209	181	1418	85421	1.7	1.7
201846	204	291	501	251	181	183	1407	76619	1.8	2.0
201847	203	260	398	230	204	240	1332	62886	2.1	2.1
201848	205	330	591	386	299	245	1851	85551	2.2	2.3
201849	198	314	703	348	294	234	1893	79414	2.4	2.5

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201850	193	398	709	374	295	172	1948	75518	2.6	2.7
201851	152	404	689	350	279	191	1913	59651	3.2	3.2
201852	143	409	418	278	218	196	1519	43872	3.5	3.4
201901	143	322	329	327	242	243	1463	44652	3.3	3.3
Totals							*20288*	*1021071*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 10 (AK, ID, OR, and WA) (Baseline: 1.1%)
Data as of Friday, January 11, 2019

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	128	75	124	110	31	31	371	45982	0.8	0.6
201841	133	112	133	111	33	42	431	49003	0.9	0.7
201842	134	91	137	118	35	40	421	47872	0.9	0.6
201843	131	74	124	100	36	48	382	47207	0.8	0.6
201844	128	110	149	99	43	38	439	45833	1.0	0.7
201845	131	141	168	113	43	23	488	47714	1.0	0.7
201846	130	154	187	135	51	42	569	46932	1.2	0.9
201847	130	157	177	154	56	64	608	42671	1.4	1.0
201848	125	146	182	163	64	50	605	46837	1.3	1.0
201849	125	162	179	154	51	47	593	44308	1.3	1.0
201850	126	178	229	179	66	62	714	45073	1.6	1.1
201851	125	189	221	172	96	60	738	44687	1.7	1.2
201852	124	206	194	193	95	72	760	40832	1.9	1.7
201901	116	267	203	232	107	117	926	42951	2.2	1.7
Totals							*8045*	*637902*		

Geographic Spread of Influenza Reported by State and Territorial Health Departments
2018-2019 Influenza Season Week 1 (December 30, 2018 – January 5, 2019)

Region	*State*	*Week 49*	*Week 50*	*Week 51*	*Week 52*	*Week 01*
1	Connecticut	REGIONAL	REGIONAL	WIDESPR	WIDESPR	WIDESPR
	Maine	SPORADIC	SPORADIC	SPORADIC	LOCAL	REGIONAL
	Massachusetts	WIDESPR	WIDESPR	WIDESPR	WIDESPR	WIDESPR
	New Hampshire	SPORADIC	REGIONAL	REGIONAL	REGIONAL	WIDESPR
	Rhode Island	REGIONAL	REGIONAL	REGIONAL	WIDESPR	WIDESPR
	Vermont	REGIONAL	REGIONAL	REGIONAL	WIDESPR	WIDESPR
2	New Jersey	LOCAL	REGIONAL	REGIONAL	WIDESPR	WIDESPR
	New York	REGIONAL	WIDESPR	WIDESPR	WIDESPR	WIDESPR
	Puerto Rico	SPORADIC	SPORADIC	REGIONAL	REGIONAL	REGIONAL
	Virgin Islands	SPORADIC	SPORADIC	SPORADIC	SPORADIC	SPORADIC
3	Delaware	LOCAL	WIDESPR	WIDESPR	WIDESPR	WIDESPR
	District of Columbia	SPORADIC	SPORADIC	SPORADIC	SPORADIC	SPORADIC
	Maryland	LOCAL	LOCAL	NO. REPT.	LOCAL	REGIONAL
	Pennsylvania	LOCAL	REGIONAL	REGIONAL	WIDESPR	WIDESPR
	Virginia	SPORADIC	REGIONAL	LOCAL	WIDESPR	WIDESPR
	West Virginia	SPORADIC	SPORADIC	LOCAL	REGIONAL	REGIONAL
4	Alabama	LOCAL	WIDESPR	REGIONAL	WIDESPR	WIDESPR
	Florida	LOCAL	REGIONAL	WIDESPR	WIDESPR	WIDESPR
	Georgia	WIDESPR	WIDESPR	WIDESPR	WIDESPR	REGIONAL
	Kentucky	REGIONAL	REGIONAL	REGIONAL	WIDESPR	WIDESPR
	Mississippi	SPORADIC	LOCAL	LOCAL	LOCAL	LOCAL
	North Carolina	REGIONAL	REGIONAL	WIDESPR	WIDESPR	WIDESPR
	South Carolina	LOCAL	LOCAL	REGIONAL	WIDESPR	WIDESPR
	Tennessee	LOCAL	LOCAL	NO. REPT.	REGIONAL	REGIONAL
5	Illinois	LOCAL	LOCAL	REGIONAL	REGIONAL	REGIONAL
	Indiana	SPORADIC	LOCAL	REGIONAL	WIDESPR	WIDESPR
	Michigan	LOCAL	LOCAL	LOCAL	REGIONAL	REGIONAL
	Minnesota	LOCAL	LOCAL	LOCAL	LOCAL	REGIONAL
	Ohio	LOCAL	REGIONAL	REGIONAL	REGIONAL	WIDESPR
	Wisconsin	SPORADIC	SPORADIC	LOCAL	LOCAL	REGIONAL
6	Arkansas	SPORADIC	LOCAL	LOCAL	REGIONAL	REGIONAL
	Louisiana	LOCAL	LOCAL	REGIONAL	WIDESPR	WIDESPR
	New Mexico	LOCAL	REGIONAL	WIDESPR	WIDESPR	WIDESPR
	Oklahoma	LOCAL	LOCAL	REGIONAL	REGIONAL	REGIONAL
	Texas	REGIONAL	REGIONAL	REGIONAL	REGIONAL	REGIONAL

Region	*State*	*Week 49*	*Week 50*	*Week 51*	*Week 52*	*Week 01*
7	Iowa	SPORADIC	LOCAL	LOCAL	REGIONAL	WIDESPR
	Kansas	LOCAL	LOCAL	LOCAL	REGIONAL	WIDESPR
	Missouri	SPORADIC	LOCAL	LOCAL	REGIONAL	REGIONAL
	Nebraska	LOCAL	REGIONAL	WIDESPR	WIDESPR	WIDESPR
8	Colorado	LOCAL	LOCAL	REGIONAL	WIDESPR	WIDESPR
	Montana	LOCAL	LOCAL	REGIONAL	REGIONAL	REGIONAL
	North Dakota	SPORADIC	LOCAL	LOCAL	REGIONAL	REGIONAL
	South Dakota	SPORADIC	SPORADIC	LOCAL	REGIONAL	REGIONAL
	Utah	LOCAL	LOCAL	REGIONAL	WIDESPR	WIDESPR
	Wyoming	SPORADIC	LOCAL	LOCAL	REGIONAL	WIDESPR
9	Arizona	REGIONAL	REGIONAL	WIDESPR	WIDESPR	WIDESPR
	California	WIDESPR	WIDESPR	WIDESPR	WIDESPR	WIDESPR
	Guam	NO. REPT.	WIDESPR	WIDESPR	NO. REPT.	NO. REPT.
	Hawaii	SPORADIC	SPORADIC	SPORADIC	SPORADIC	LOCAL
	Nevada	REGIONAL	REGIONAL	REGIONAL	REGIONAL	WIDESPR
10	Alaska	SPORADIC	SPORADIC	SPORADIC	SPORADIC	SPORADIC
	Idaho	REGIONAL	REGIONAL	REGIONAL	WIDESPR	WIDESPR
	Oregon	LOCAL	REGIONAL	LOCAL	REGIONAL	WIDESPR
	Washington	SPORADIC	SPORADIC	LOCAL	LOCAL	REGIONAL

NCHS Mortality Surveillance Data
Data as of January 10, 2019
For the Week Ending December 29, 2018 (Week 52)

YEAR	WEEK	% OF DEATHS	EXPECTED	THRESH.	TOTAL DEATHS	PNEUMONIA DEATHS	INFLUENZA DEATHS
2018	38	5.45	5.34	5.68	51041	2773	11
2018	39	5.53	5.40	5.74	50485	2776	14
2018	40	5.62	5.48	5.81	51333	2873	10
2018	41	5.50	5.56	5.89	50334	2758	12
2018	42	5.55	5.64	5.98	50668	2792	18
2018	43	5.68	5.74	6.07	51303	2893	22
2018	44	5.55	5.83	6.17	50889	2802	23
2018	45	5.59	5.94	6.28	50332	2786	27
2018	46	5.78	6.04	6.38	50602	2903	24
2018	47	5.72	6.15	6.48	49965	2826	31
2018	48	5.94	6.25	6.59	48837	2865	34
2018	49	6.02	6.35	6.69	47409	2806	47
2018	50	6.30	6.45	6.79	45529	2825	45
2018	51	6.19	6.54	6.88	40623	2442	71
2018	52	6.40	6.63	6.97	32161	1986	73

FLUVIEW
A Weekly Influenza Surveillance Report Prepared by the Influenza Division

2018-2019 Influenza Season
Week 51 ending December 22, 2018

All data are preliminary and may change as more reports are received.

An overview of the CDC influenza surveillance system, including methodology and detailed descriptions of each data component, is available at http://www.cdc.gov/flu/weekly/overview.htm.

Synopsis: Influenza activity in the United States is increasing. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending December 22, 2018:

- **Viral Surveillance**: Influenza A viruses have predominated in the United States since the beginning of October. Influenza A(H1N1)pdm09 viruses have predominated in most areas of the country, however influenza A(H3) viruses predominated in the southeastern United States (HHS Region 4). The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories is increasing.
    - **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses. A comparison of gene sequences of recent influenza A(H1N1)pdm09 viruses from the U.S. and Mexico/Central America showed them to be similar.
    - **Antiviral Resistance:** All viruses tested show susceptibility to the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir).
- **Influenza-like Illness Surveillance**: The proportion of outpatient visits for influenza-like illness (ILI) increased to 3.3%, which is above the national baseline of 2.2%. Nine of 10 regions reported ILI at or above their region-specific baseline level.
    - **ILI State Activity Indicator Map:** New York City and nine states experienced high ILI activity; Puerto Rico and seven states experienced moderate ILI activity; 11 states experienced low ILI activity; the District of Columbia and 22 states experienced minimal ILI activity; and one state had insufficient data. Among the four states along the southern U.S. border, ILI activity increased to moderate in Arizona and high in New Mexico.
- **Geographic Spread of Influenza**: The geographic spread of influenza in Guam and 11 states was reported as widespread; Puerto Rico and 19 states reported regional activity; 15 states reported local activity; the District of Columbia, the U.S. Virgin Islands and three states reported sporadic activity; and two states did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 3.6 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among children younger than 5 years (10.0 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality**: The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths**: Four influenza-associated pediatric deaths were

reported to CDC during week 51.

National and Regional Summary of Select Surveillance Components

HHS Surveillance Regions*	Data for current week			Predominant flu virus reported by public health laboratories for the most recent three weeks
	Out-patient ILI†	Number of jurisdictions reporting regional or widespread activity	% respiratory specimens positive for flu in clinical laboratories‡	
Nation	Elevated	32 of 54	15.6%	Influenza A(H1N1)pdm09
Region 1	Elevated	5 of 6	8.2%	Influenza A(H1N1)pdm09
Region 2	Elevated	3 of 4	4.8%	Influenza A(H1N1)pdm09
Region 3	Elevated	2 of 6	4.1%	Influenza A(H1N1)pdm09
Region 4	Elevated	6 of 8	19.9%	Influenza A(H3)
Region 5	Elevated	3 of 6	6.9%	Influenza A(H1N1)pdm09
Region 6	Elevated	4 of 5	12.2%	Influenza A(H1N1)pdm09
Region 7	Elevated	1 of 4	7.8%	Influenza A(H1N1)pdm09
Region 8	Elevated	3 of 6	10.2%	Influenza A(H1N1)pdm09
Region 9	Elevated	4 of 5	15.6%	Influenza A(H1N1)pdm09
Region 10	Normal	1 of 4	4.9%	Influenza A(H1N1)pdm09

*http://www.hhs.gov/about/agencies/staff-divisions/iea/regional-offices/index.html
† Elevated means the % of visits for ILI is at or above the national or region-specific baseline.
§ Includes all 50 states, the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands
‡ National data are for current week; regional data are for the most recent three weeks.

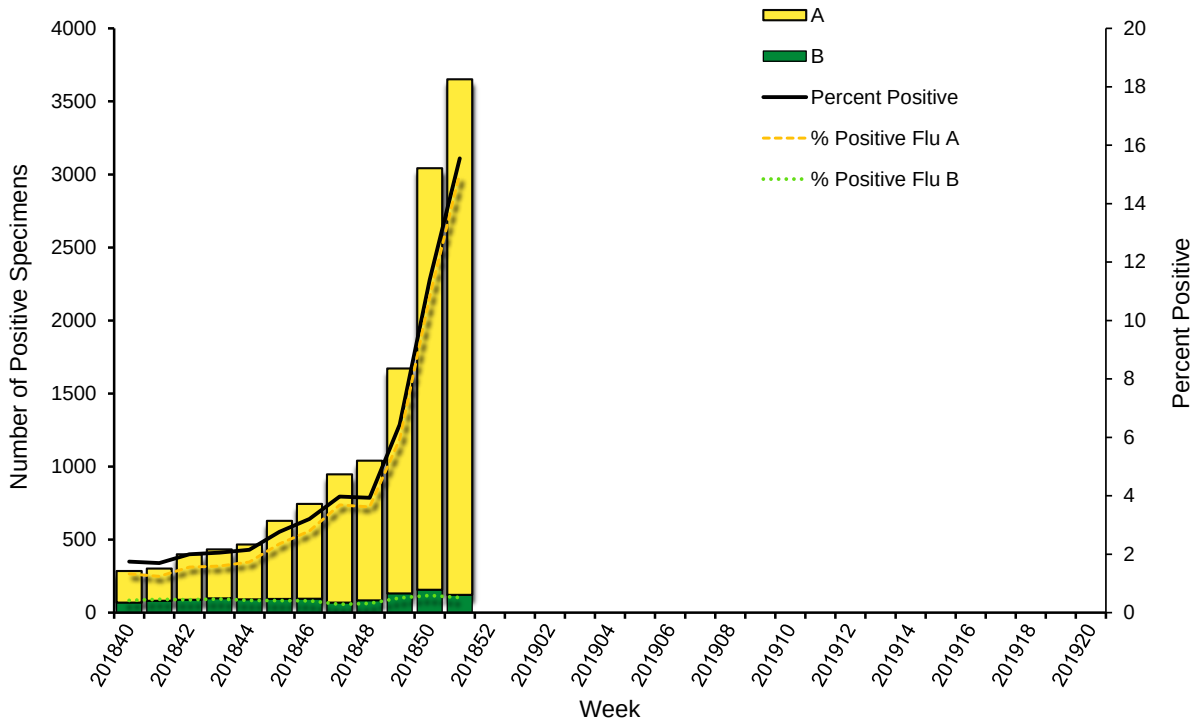
U.S. Virologic Surveillance: WHO and NREVSS collaborating laboratories, which include both public health and clinical laboratories located in all 50 states, Puerto Rico, Guam, and the District of Columbia, report to CDC the total number of respiratory specimens tested for influenza and the number positive for influenza by virus type. In addition, public health laboratories also report the influenza A subtype (H1 or H3) and influenza B lineage information of the viruses they test and the age or age group of the persons from whom the specimens were collected.

Additional virologic data, including national, regional and select state-level data, can be found at: http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html. Age group proportions and totals by influenza subtype reported by public health laboratories can be found at: http://gis.cdc.gov/grasp/fluview/flu_by_age_virus.html.

The results of tests performed by clinical laboratories are summarized below.

	Week 51	Data Cumulative since September 30, 2018 (week 40)
No. of specimens tested	23,479	269,244
No. of positive specimens (%)	3,651 (15.6%)	13,611 (5.1%)
Positive specimens by type		
Influenza A	3,529 (96.7%)	12,434 (91.4%)
Influenza B	122 (3.3%)	1,177 (8.6%)

Influenza Positive Tests Reported to CDC by U.S. Clinical Laboratories, National Summary, 2018-2019 Season

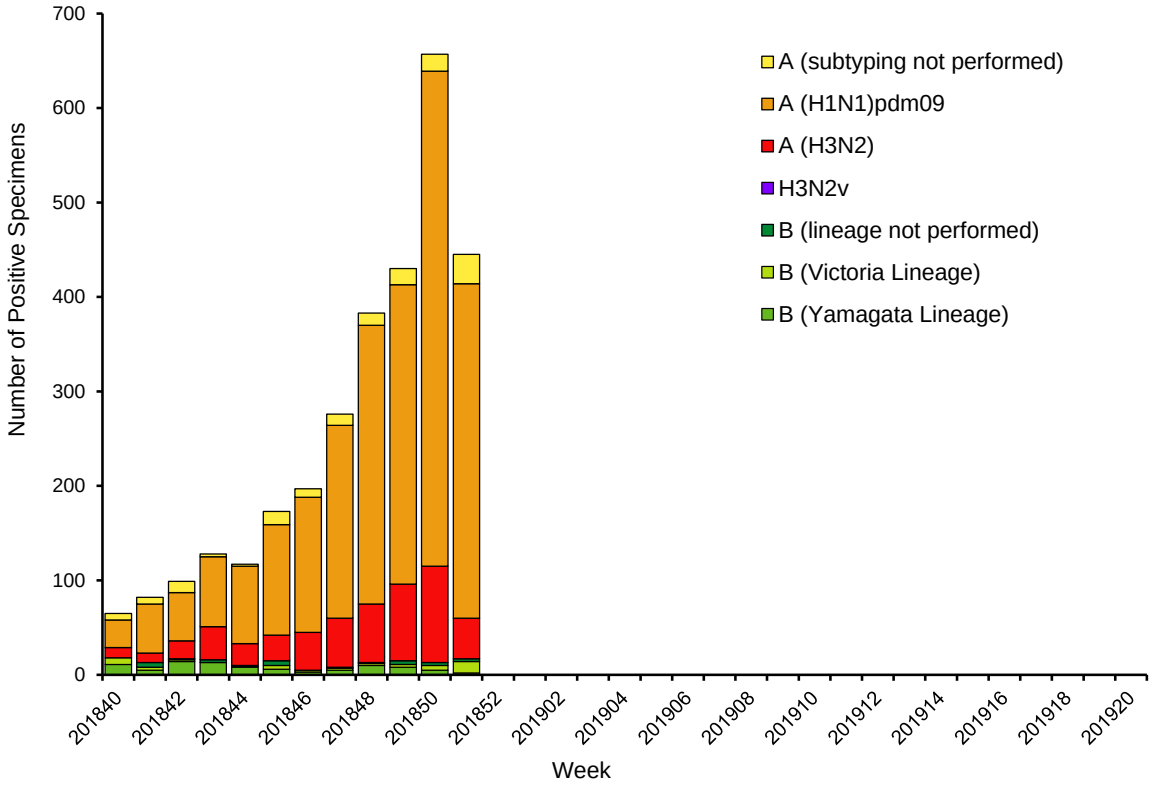


The results of tests performed by public health laboratories are summarized below.

	Week 51	Data Cumulative since September 30, 2018 (week 40)
No. of specimens tested	824	14,166
No. of positive specimens*	445	3,052
Positive specimens by type/subtype		
Influenza A	428 (96.2%)	2,892 (94.8%)
(H1N1)pdm09	354 (89.2%)	2,242 (81.6%)
H3N2	43 (10.8%)	505 (18.4%)
Subtyping not performed	31	145
Influenza B	17 (3.8%)	160 (5.2%)
Yamagata lineage	2 (14.3%)	90 (67.7%)
Victoria lineage	12 (85.7%)	43 (32.3%)
Lineage not performed	3	27

*The percent of specimens testing positive for influenza is not reported because public health laboratories often receive samples that have already tested positive for influenza at a clinical laboratory and therefore percent positive would not be a valid indicator of influenza activity. Additional information is available at http://www.cdc.gov/flu/weekly/overview.htm

Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, 2018-2019 Season



Influenza Virus Characterization: Close monitoring of influenza viruses is required to better assess the potential impact on public health. CDC characterizes influenza viruses through one or more tests including genomic sequencing, hemagglutination inhibition (HI) and/or neutralization based Focus Reduction assays (FRA). These data are used to compare how similar currently circulating influenza viruses are to the reference viruses used for developing new influenza vaccines and to monitor evolutionary changes that continually occur in influenza viruses circulating in humans. Antigenic and genetic characterization of circulating influenza viruses gives an indication of the influenza vaccine's ability to induce an immune response against the wide array of influenza viruses that are co-circulating every season. However, annual vaccine effectiveness estimates are needed to determine how much protection was provided to the population by vaccination.

For nearly all influenza-positive surveillance samples received at CDC, next-generation sequencing is performed to determine the genetic identity of circulating influenza viruses and to monitor the evolutionary trajectory of viruses circulating in our population. Virus gene segments are classified into genetic clades/subclades based on phylogenetic analysis. However, genetic changes that classify the clades/subclades do not always result in antigenic changes. “Antigenic drift” is a term used to describe gradual antigenic change that occurs as viruses evolve to escape host immune pressure. Antigenic drift is evaluated by comparing antigenic properties of cell-propagated reference viruses representing currently recommended vaccine components with those of cell-propagated circulating viruses.

CDC has antigenically or genetically characterized 273 influenza viruses collected September 30, 2018 – December 22, 2018, and submitted by U.S. laboratories, including 169 influenza A(H1N1)pdm09 viruses, 73 influenza A(H3N2) viruses, and 31 influenza B viruses.

Influenza A Viruses

- **A(H1N1)pdm09:** Phylogenetic analysis of the HA genes from 169 A(H1N1)pdm09 viruses showed that all belonged to clade 6B.1. Seventy-nine A(H1N1)pdm09 viruses were antigenically characterized, and 78 (98.7%) were antigenically similar (analyzed using HI with ferret antisera) to A/Michigan/45/2015 (6B.1), a cell-propagated A/Michigan/45/2015-like reference virus representing the A(H1N1)pdm09 component for the 2018-19 Northern Hemisphere influenza vaccines.

- **A(H3N2):** Phylogenetic analysis of the HA genes from 73 A(H3N2) viruses revealed extensive genetic diversity with multiple clades/subclades co-circulating. The HA genes of circulating viruses belonged to clade 3C.2a (n=29), subclade 3C.2a1 (n=40) or clade 3C.3a (n=4). Six A(H3N2) viruses were antigenically characterized by FRA with ferret antisera, and all 6 (100%) A(H3N2) viruses tested were well-inhibited (reacting at titers that were within 4-fold of the homologous virus titer) by ferret antisera raised against A/Singapore/INFIMH-16-0019/2016 (3C.2a1), a cell-propagated A/Singapore/INFIMH-16-0019/2016-like reference virus representing the A(H3N2) component of 2018-19 Northern Hemisphere influenza vaccines.

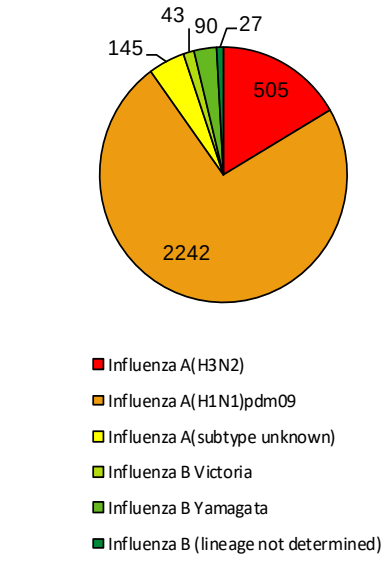
Influenza B Viruses

- **B/Victoria:** Phylogenetic analysis of 8 B/Victoria-lineage viruses indicate that all HA genes belonged to genetic clade V1A, however genetic subclades which are antigenically distinct have emerged. Genetic subclades which are antigenically distinct include viruses with a two amino acid deletion (162-163) in the HA protein (V1A.1, previously abbreviated as V1A-2Del) and viruses with a three amino acid deletion (162-164) in the HA protein (abbreviated as V1A-3Del). Eight B/Victoria lineage viruses were antigenically characterized and 4 (50%) were antigenically similar with ferret antisera raised against cell-propagated B/Colorado/06/2017-like V1A.1 reference virus. Four (50%) reacted poorly (at titers that were 8-fold or greater reduced compared with the homologous virus titer) and belonged to clade V1A.

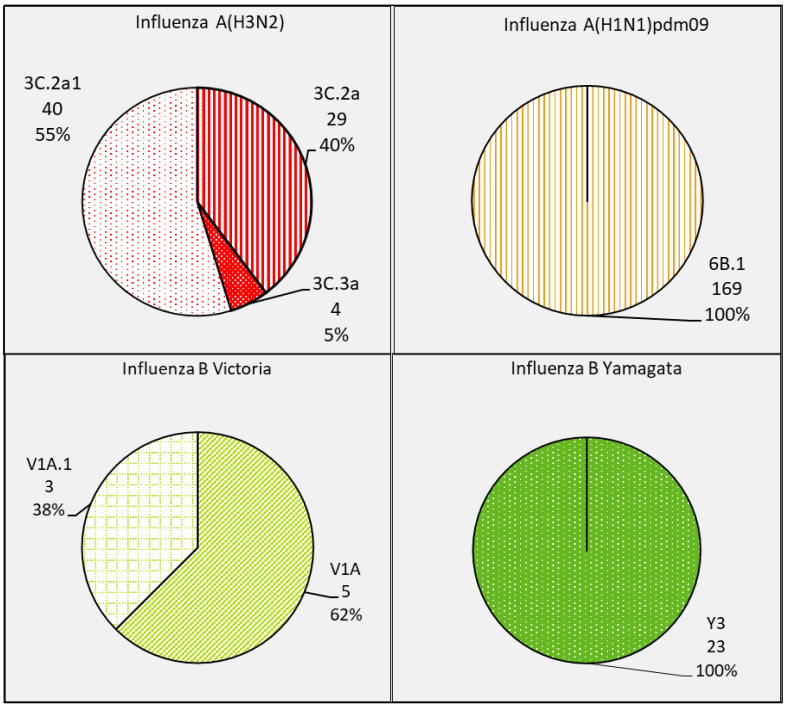
- **B/Yamagata:** Phylogenetic analysis of 23 influenza B/Yamagata-lineage viruses indicate that the HA genes belonged to clade Y3. A total of 16 influenza B/Yamagata-lineage viruses were antigenically characterized, and all were antigenically similar to cell-propagated B/Phuket/3073/2013 (Y3), the reference vaccine virus representing the influenza B/Yamagata-lineage component of the 2018-19 Northern Hemisphere quadrivalent vaccines.

The majority of U.S. viruses submitted for characterization come from state and local public health laboratories. Due to Right Size Roadmap considerations, specimen submission guidance to laboratories is that, if available, 2 influenza A(H1N1)pdm09, 2 influenza A(H3N2), and 2 influenza B viruses be submitted every other week. Therefore, the numbers of each virus type/subtype characterized should be more balanced across subtypes/lineages but will not reflect the actual proportion of circulating viruses. In the figure below, the results of tests performed by public health labs are shown on the left and CDC sequence results (by genetic clade/subclade) are shown on the right.

Influenza Positive Specimens Reported by U.S. Public Health Laboratories, Cumulative, 2018-2019 Season



Sequence Results, by Genetic HA Clade/Subclade, of Specimens Submitted to CDC by U.S. Public Health Laboratories, Cumulative, 2018-2019 Season



Antiviral Resistance: Testing of influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses for resistance to the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir) is performed at CDC using next-generation sequencing analysis and/or a functional assay. Neuraminidase sequences of viruses are inspected to detect the presence of amino acid substitutions, previously associated with reduced or highly reduced inhibition by any of three neuraminidase inhibitors. In addition, a subset of viruses are tested using the neuraminidase inhibition assay with three neuraminidase inhibitors. The level of neuraminidase activity inhibition is reported using the thresholds recommended by the World Health Organization Expert Working Group of the Global Influenza Surveillance and Response System (GISRS). These samples are routinely obtained for surveillance purposes rather than for diagnostic testing of patients suspected to be infected with an antiviral-resistant virus.

Reporting of baloxavir susceptibility testing for the 2018-2019 influenza season will begin later this season. More information regarding influenza antiviral drug resistance can be found here.

High levels of resistance to the adamantanes (amantadine and rimantadine) persist among influenza A(H1N1)pdm09 and influenza A(H3N2) viruses (the adamantanes are not effective against influenza B viruses). Therefore, data from adamantane resistance testing are not presented below.

Assessment of Virus Susceptibility to Neuraminidase Inhibitors Using Next-Generation Sequencing Analysis and/or Neuraminidase Inhibition Assay

Type/Subtype or Lineage	Inhibition of Neuraminidase Activity by Antiviral Drug								
	Oseltamivir			Peramivir			Zanamivir		
	Virus Tested (n)	Reduced, Number (%)	Highly Reduced, Number (%)	Virus Tested (n)	Reduced, Number (%)	Highly Reduced, Number (%)	Virus Tested (n)	Reduced, Number (%)	Highly Reduced, Number (%)
Total Viruses	269	0 (0%)	0 (0%)	269	0 (0%)	0 (0%)	269	0 (0%)	0 (0%)
A(H1N1)pdm09	168	0 (0%)	0 (0%)	168	0 (0%)	0 (0%)	168	0 (0%)	0 (0%)
A(H3N2)	71	0 (0%)	0 (0%)	71	0 (0%)	0 (0%)	71	0 (0%)	0 (0%)
B/Victoria	8	0 (0%)	0 (0%)	8	0 (0%)	0 (0%)	8	0 (0%)	0 (0%)
B/Yamagata	22	0 (0%)	0 (0%)	22	0 (0%)	0 (0%)	22	0 (0%)	0 (0%)

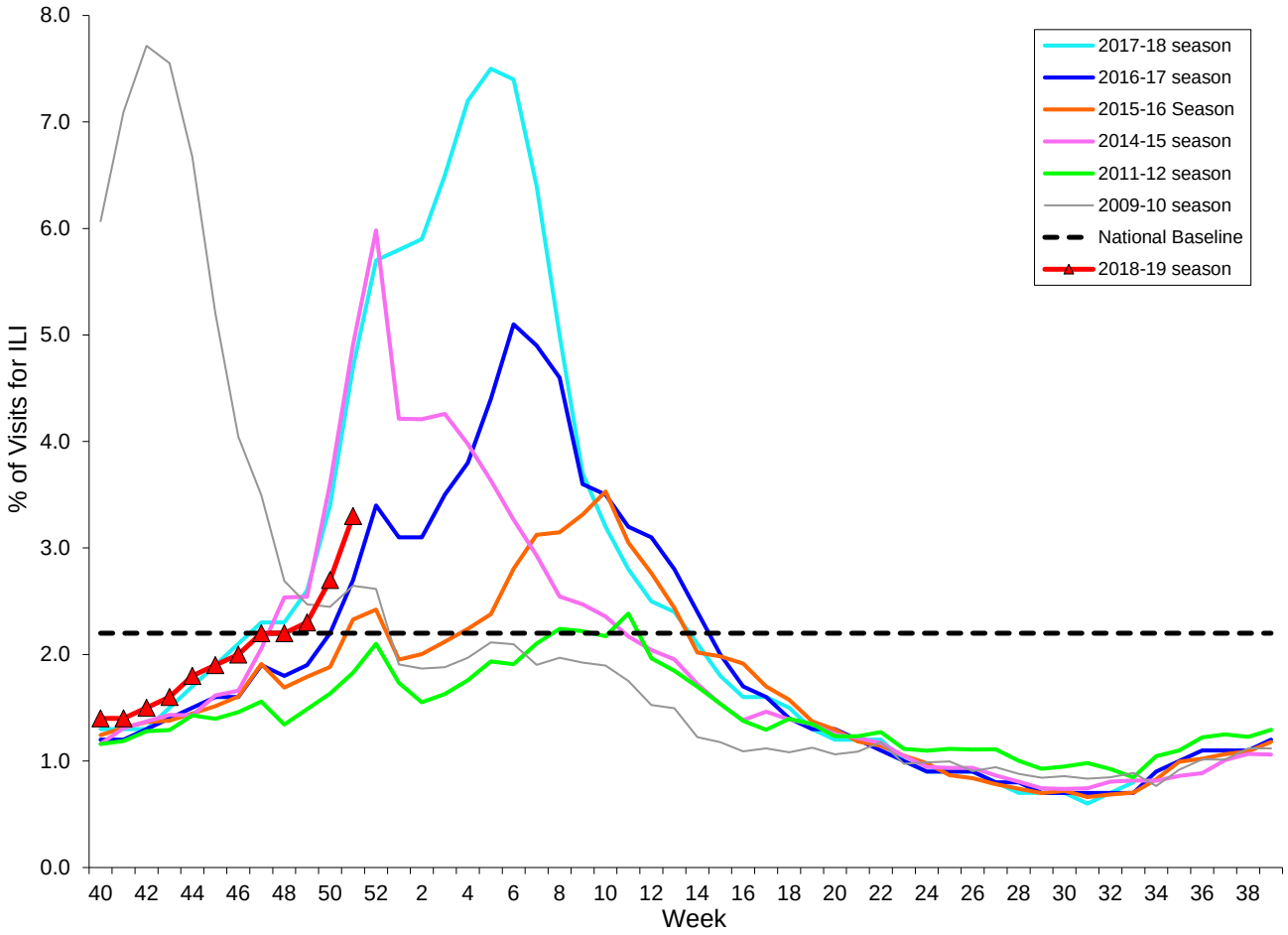
Antiviral treatment as early as possible is recommended for patients with confirmed or suspected influenza who have severe, complicated, or progressive illness; who require hospitalization; or who are at high risk for serious influenza-related complications. Additional information on recommendations for treatment and chemoprophylaxis of influenza virus infection with antiviral agents is available at: http://www.cdc.gov/flu/antivirals/index.htm.

Outpatient Illness Surveillance: Nationwide during week 51, 3.3% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI). This percentage is above the national baseline of 2.2%. *(ILI is defined as fever (temperature of 100°F [37.8°C] or greater) and cough and/or sore throat.)*

On a regional level, the percentage of outpatient visits for ILI ranged from 1.0% to 4.7% during week 51. Nine of 10 regions (Regions 1, 2, 3, 4, 5, 6, 7, 8, and 9) reported a percentage of outpatient visits for ILI at or above their region-specific baseline.

Additional data on medically attended visits for ILI for current and past seasons and by geography (national, HHS region, or select states) are available on FluView Interactive (https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html).

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2018-2019 and Selected Previous Seasons



ILINet State Activity Indicator Map: Data collected in ILINet are used to produce a measure of ILI activity* by state. Activity levels are based on the percent of outpatient visits in a state due to ILI and are compared to the average percent of ILI visits that occur during weeks with little or no influenza virus circulation. Activity levels range from minimal, which would correspond to ILI activity from outpatient clinics being below, or only slightly above the average, to high, which would correspond to ILI activity from outpatient clinics being much higher than average.

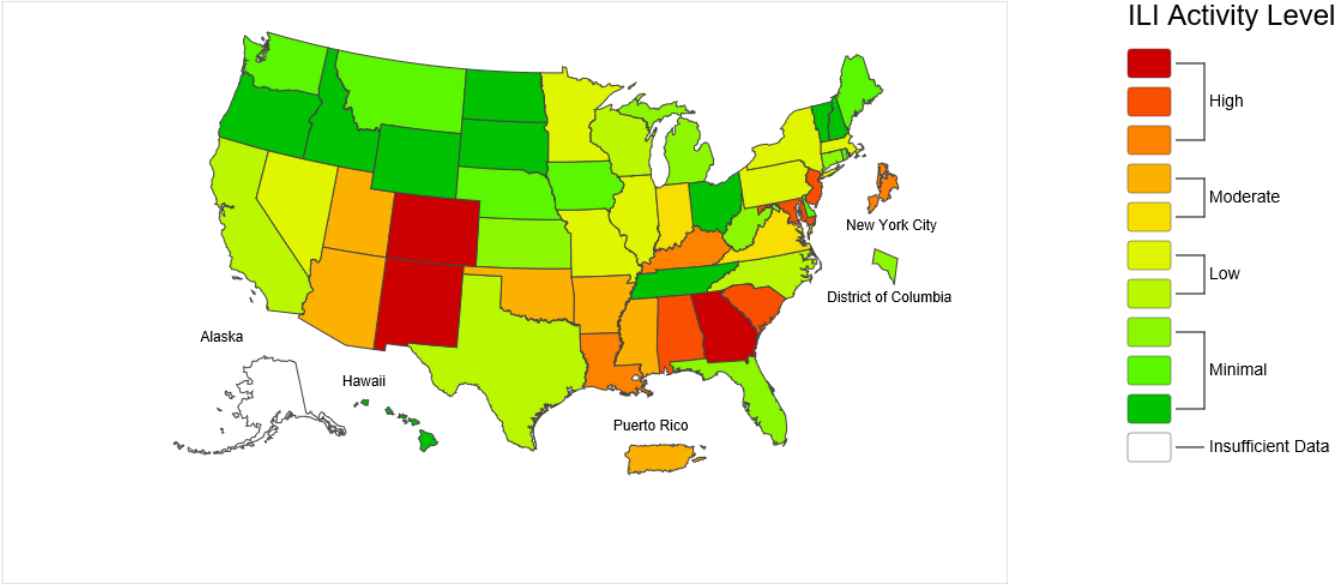
The ILI Activity Indicator Map displays state-specific activity levels for multiple seasons and allows a visual representation of relative activity from state to state. More information is available on FluView Interactive at https://gis.cdc.gov/grasp/fluview/main.html.

During week 51, the following ILI activity levels were experienced:

- New York City and nine states (Alabama, Colorado, Georgia, Kentucky, Louisiana, Maryland, New Jersey, New Mexico, and South Carolina) experienced high ILI activity.
- Puerto Rico and seven states (Arkansas, Arizona, Indiana, Mississippi, Oklahoma, Utah, and Virginia) experienced moderate ILI activity.
- 11 states (California, Illinois, Massachusetts, Minnesota, Missouri, North Carolina, Nevada, New York, Pennsylvania, Texas, and Wisconsin) experienced low ILI activity.
- The District of Columbia and 22 states (Connecticut, Delaware, Florida, Hawaii, Iowa, Idaho, Kansas, Maine, Michigan, Montana, North Dakota, Nebraska, New Hampshire, Ohio, Oregon, Rhode Island, South Dakota, Tennessee, Vermont, Washington, West Virginia, and Wyoming) experienced minimal ILI activity.
- Data were insufficient to calculate an ILI activity level for one state (Alaska).

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet

2018-19 Influenza Season Week 51 ending Dec 22, 2018

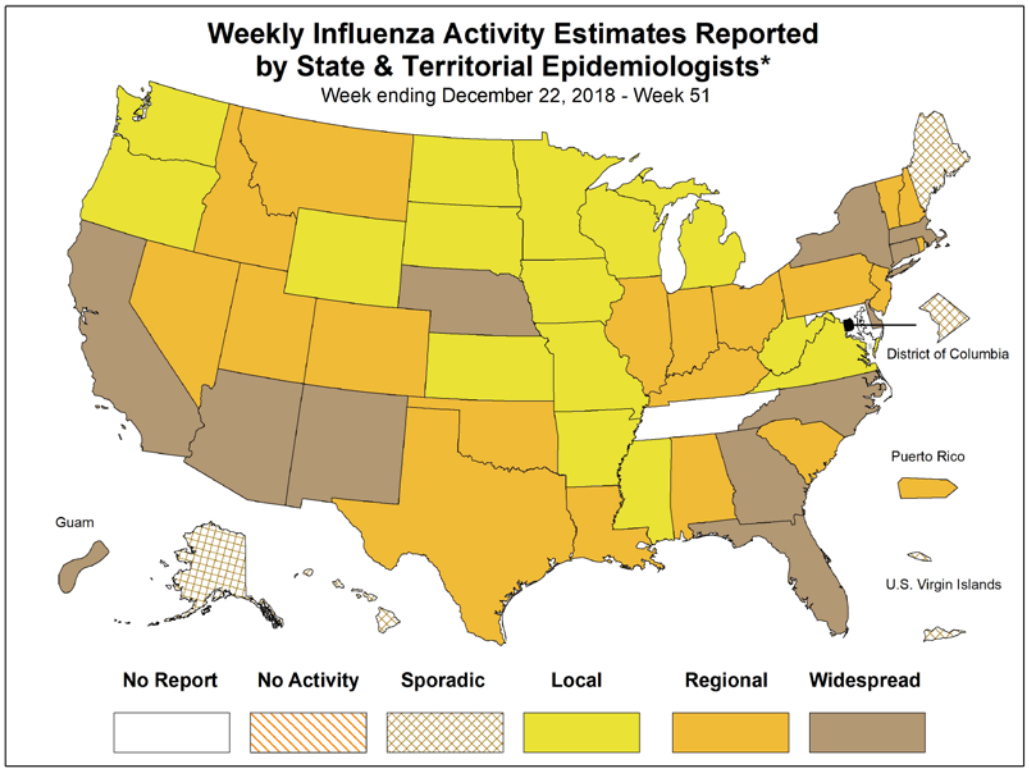


*This map uses the proportion of outpatient visits to health care providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.
Data collected in ILINet may disproportionally represent certain populations within a state, and therefore, may not accurately depict the full picture of influenza activity for the whole state.
Data displayed in this map are based on data collected in ILINet, whereas the State and Territorial flu activity map is based on reports from state and territorial epidemiologists. The data presented in this map is preliminary and may change as more data are received.
Differences in the data presented here by CDC and independently by some state health departments likely represent differing levels of data completeness with data presented by the state likely being the more complete.

Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists: The influenza activity reported by state and territorial epidemiologists indicates geographic spread of influenza viruses, but does not measure the severity of influenza activity. Additional data displaying the influenza activity reported by state and territorial epidemiologists for the current and past seasons are available on FluView Interactive at https://gis.cdc.gov/grasp/fluview/FluView8.html.

During week 51, the following influenza activity was reported:

- Widespread influenza activity was reported by Guam and 11 states (Arizona, California, Connecticut, Delaware, Florida, Georgia, Massachusetts, Nebraska, New Mexico, New York, and North Carolina).
- Regional influenza activity was reported by Puerto Rico and 19 states (Alabama, Colorado, Idaho, Illinois, Indiana, Kentucky, Louisiana, Montana, Nevada, New Hampshire, New Jersey, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, and Vermont).
- Local influenza activity was reported by 15 states (Arkansas, Iowa, Kansas, Michigan, Minnesota, Mississippi, Missouri, North Dakota, Oregon, South Dakota, Virginia, Washington, West Virginia, Wisconsin and Wyoming).
- Sporadic influenza activity was reported by the District of Columbia, the U.S. Virgin Islands and three states (Alaska, Hawaii, and Maine,).
- Two states did not report (Maryland and Tennessee).

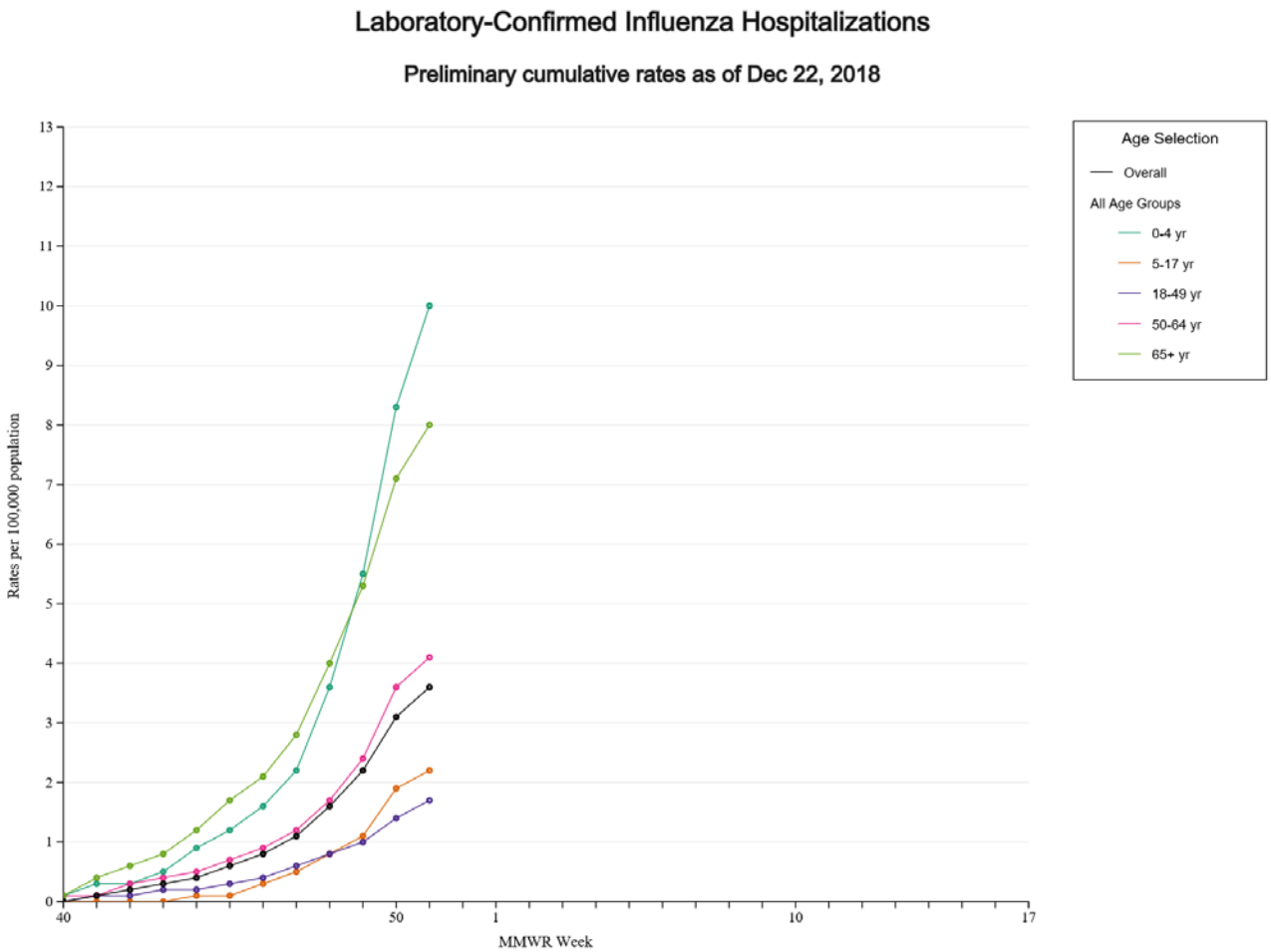


* This map indicates geographic spread & does not measure the severity of influenza activity

Influenza-Associated Hospitalizations: The Influenza Hospitalization Surveillance Network (FluSurv-NET) conducts population-based surveillance for laboratory-confirmed influenza-related hospitalizations in select counties in the Emerging Infections Program (EIP) states and Influenza Hospitalization Surveillance Project (IHSP) states.

A total of 1,047 laboratory-confirmed influenza-associated hospitalizations were reported between October 1, 2018 and December 22, 2018. The overall hospitalization rate was 3.6 per 100,000 population. The highest rate of hospitalization was among children aged 0-4 years (10.0 per 100,000 population), followed by adults aged ≥65 years (8.0 per 100,000 population) and adults aged 50-64 years (4.1 per 100,000 population). Among 1,047 hospitalizations, 906 (86.5%) were associated with influenza A virus, 125 (11.9%) with influenza B virus, 12 (1.1%) with influenza A virus and influenza B virus co-infection, and 4 (0.4%) with influenza virus for which the type was not determined. Among those with influenza A subtype information, 168 (77.4%) were A(H1N1)pdm09 and 49 (22.6%) were A(H3N2).

Additional FluSurv-NET data displaying hospitalization rates for the current and past seasons and different age groups, as well as data on patient characteristics (such as influenza virus type, demographic, and clinical information), are available on FluView Interactive at: http://gis.cdc.gov/GRASP/Fluview/FluHospRates.html and http://gis.cdc.gov/grasp/fluview/FluHospChars.html.

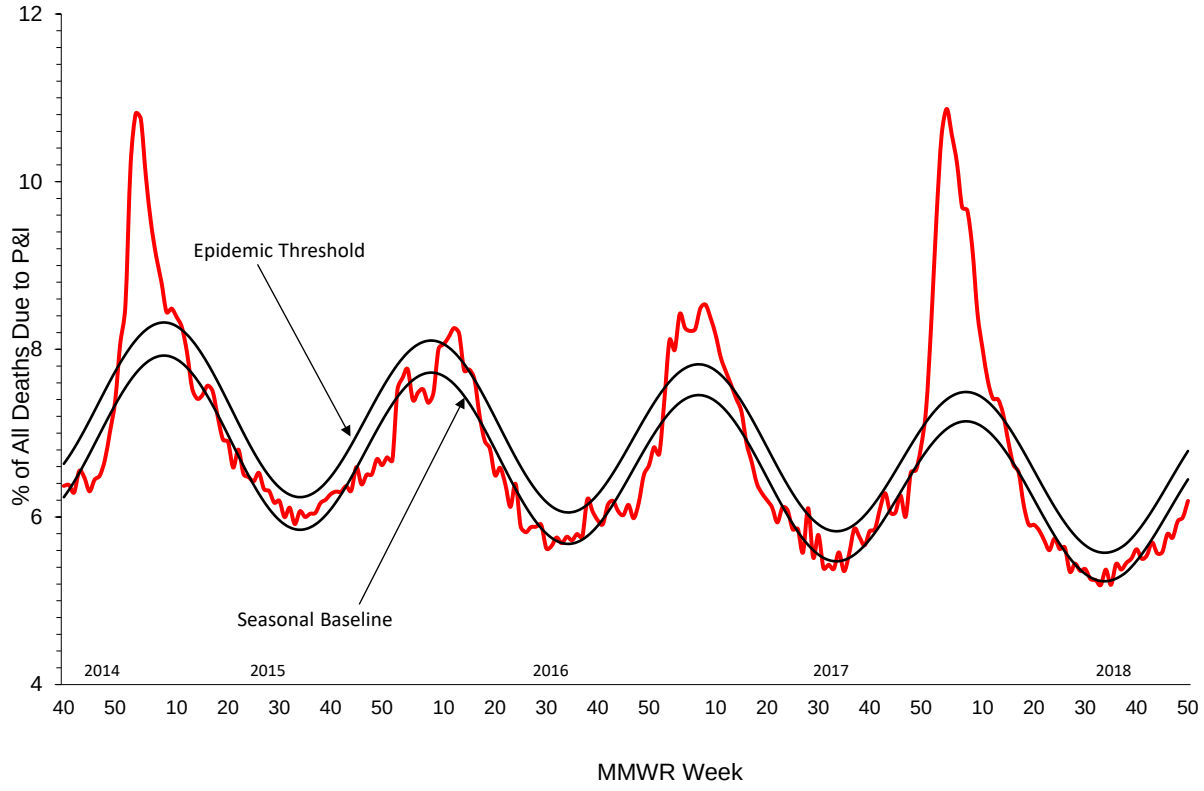


Data are from the Influenza Hospitalization Surveillance Network (FluSurv-NET), a population-based surveillance for influenza related hospitalizations in children and adults in 13 U.S. states. Incidence rates are calculated using the National Center for Health Statistics' (NCHS) population estimates for the counties included in the surveillance catchment area.

Pneumonia and Influenza (P&I) Mortality Surveillance: Based on National Center for Health Statistics (NCHS) mortality surveillance data available on December 27, 2018, 6.2% of the deaths occurring during the week ending December 15, 2018 (week 50) were due to P&I. This percentage is below the epidemic threshold of 6.8% for week 50.

Additional pneumonia and influenza mortality data for current and past seasons and by geography (national, HHS region, or state) are available at on FluView Interactive (https://gis.cdc.gov/grasp/fluview/mortality.html). Data displayed on the regional and state-level are aggregated by the state of residence of the decedent.

Pneumonia and Influenza Mortality from
the National Center for Health Statistics Mortality Surveillance System
Data through the week ending December 15, 2018, as of December 27, 2018

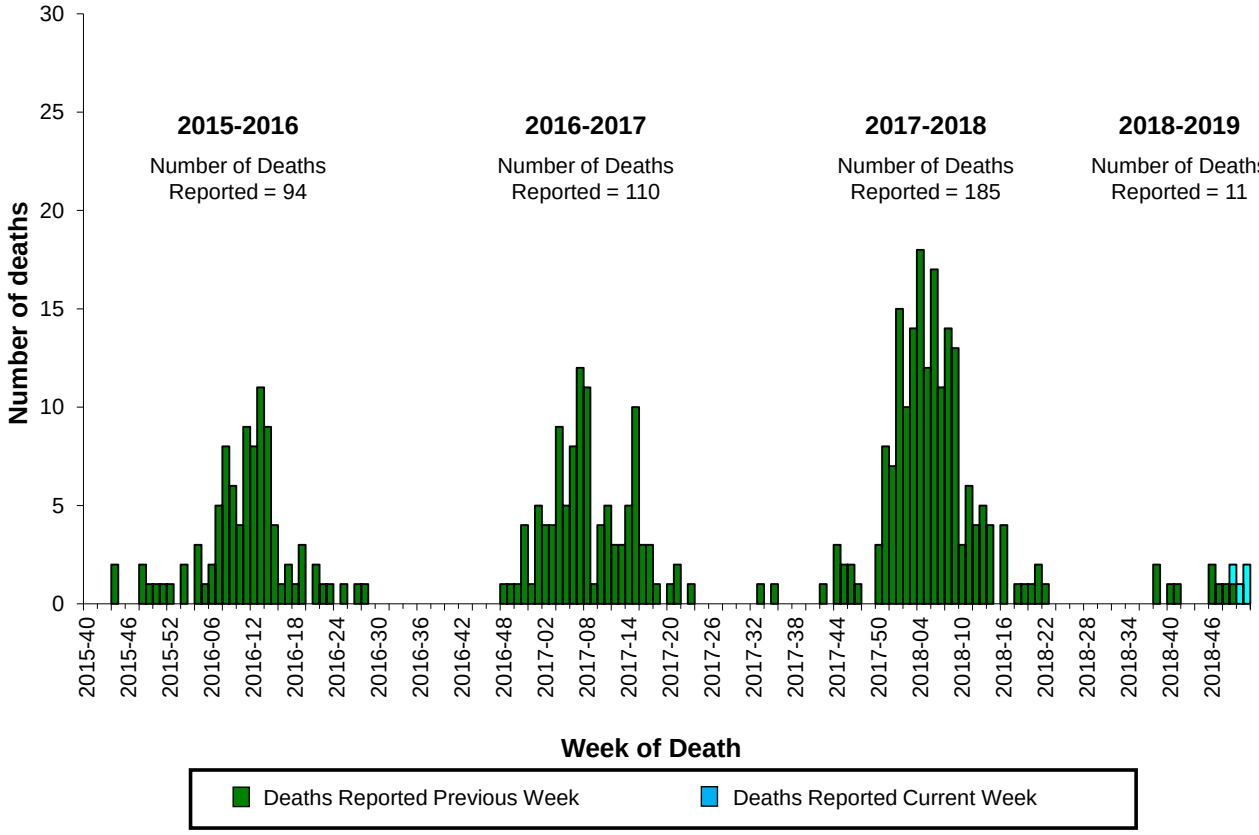


Influenza-Associated Pediatric Mortality: Four influenza-associated pediatric deaths were reported to CDC during week 51. One death was associated with an influenza A virus for which no subtyping was performed and occurred during week 49 (the week ending December 8, 2018).Three deaths were associated with an influenza A(H1N1)pdm09 virus and occurred during weeks 50 and 51 (the weeks ending December 15 and December 22, 2018, respectively).

A total of eleven influenza-associated pediatric deaths have been reported for the 2018-2019 season.

Additional information on influenza-associated pediatric deaths including basic demographics, underlying conditions, bacterial co-infections, and place of death for the current and past seasons, is available on FluView Interactive (https://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html).

Number of Influenza-Associated Pediatric Deaths by Week of Death: 2015-2016 season to present



Additional National and International Influenza Surveillance Information is available at: https://www.cdc.gov/flu/weekly/#AddInfo

Report prepared: December 28, 2018.

WHO Collaborating Laboratory Reports
2018-2019 Influenza Season

Region=National

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	79	771	7	29	11	0	0	7	11	235	16327	285	1.75	217	68
201841	78	882	7	52	10	0	5	3	5	235	17807	302	1.70	221	81
201842	85	1063	12	51	19	0	1	2	14	232	19943	399	2.00	311	88
201843	81	1065	3	74	35	0	3	0	13	229	21062	433	2.06	335	98
201844	83	1193	2	82	23	0	1	1	8	229	21686	466	2.15	375	91
201845	84	1277	14	117	27	0	5	4	6	227	22745	629	2.77	535	94
201846	86	1356	9	143	40	0	0	2	3	226	23234	744	3.20	649	95
201847	81	1058	12	204	52	0	1	2	5	225	23835	947	3.97	879	68
201848	85	1611	13	295	62	0	1	2	10	221	26449	1040	3.93	956	84
201849	85	1515	17	317	81	0	4	3	8	215	25966	1672	6.44	1541	131
201850	81	1551	18	524	102	0	3	5	5	174	26711	3043	11.39	2886	157
201851	70	824	31	354	43	0	3	12	2	135	23479	3651	15.55	3529	122
Total	0	14166	145	2242	505	0	27	43	90	.	269244	13611	5.06	12434	1177

Region=Region 1 (CT, ME, MA, NH, RI, VT)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	5	26	0	1	0	0	0	0	1	15	922	3	0.33	2	1
201841	6	30	0	1	3	0	0	0	0	15	971	4	0.41	2	2
201842	6	34	0	3	0	0	0	1	0	15	1110	2	0.18	2	0
201843	5	26	0	3	1	0	0	0	0	15	1152	16	1.39	12	4
201844	6	37	0	2	0	0	0	0	1	15	1279	24	1.88	19	5
201845	6	27	0	3	0	0	0	0	0	15	1268	25	1.97	25	0
201846	5	33	0	4	0	0	0	0	0	15	1234	18	1.46	14	4
201847	5	30	0	3	1	0	0	0	0	15	1256	24	1.91	24	0
201848	6	43	0	7	5	0	0	0	0	15	1551	42	2.71	39	3
201849	6	63	0	15	12	0	0	0	0	14	1514	72	4.76	67	5
201850	5	67	0	19	10	0	0	0	0	12	1373	101	7.36	96	5
201851	5	38	0	27	2	0	0	0	1	11	1595	195	12.23	194	1
Total	0	454	0	88	34	0	0	1	3	.	15225	526	3.45	496	30

Region=Region 2 (NJ, NY, PR)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	4	41	0	5	0	0	0	0	0	12	1735	13	0.75	10	3
201841	5	36	0	7	0	0	0	0	0	13	2280	13	0.57	11	2
201842	5	43	0	5	1	0	0	0	0	13	2394	7	0.29	7	0
201843	5	39	0	6	4	0	0	0	0	13	2511	14	0.56	11	3
201844	5	35	0	6	2	0	0	0	0	13	2438	14	0.57	12	2
201845	7	55	0	10	0	0	0	0	0	13	2456	26	1.06	25	1

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201846	6	55	0	17	1	0	0	0	0	14	2492	33	1.32	32	1
201847	5	45	0	20	5	0	0	0	0	14	2563	44	1.72	40	4
201848	7	71	0	26	3	0	0	0	0	14	2977	82	2.75	75	7
201849	6	68	0	31	2	0	0	0	0	12	2414	79	3.27	73	6
201850	6	66	0	33	2	0	0	0	0	12	2662	134	5.03	129	5
201851	4	57	0	39	5	0	0	0	0	8	1890	118	6.24	116	2
Total	0	611	0	205	25	0	0	0	0	.	28812	577	2.00	541	36

Region=Region 3 (DE, DC, MD, PA, VA, WV)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	7	153	0	1	2	0	0	7	0	19	1181	4	0.34	3	1
201841	7	175	0	5	1	0	1	2	0	19	1230	7	0.57	4	3
201842	7	261	1	5	0	0	0	0	2	19	1265	9	0.71	9	0
201843	7	219	0	9	2	0	0	0	0	18	1434	8	0.56	7	1
201844	8	250	0	7	4	0	1	0	0	18	1518	3	0.20	2	1
201845	7	306	0	16	1	0	1	1	1	18	1554	8	0.51	4	4
201846	7	281	0	23	4	0	0	0	0	18	1625	9	0.55	9	0
201847	6	236	0	32	2	0	0	1	0	18	1642	27	1.64	26	1
201848	8	319	1	37	7	0	0	0	2	17	1872	30	1.60	28	2
201849	7	311	1	32	9	0	2	1	1	17	1761	44	2.50	42	2
201850	7	344	0	60	20	0	1	1	1	16	1842	95	5.16	91	4
201851	5	179	7	46	4	0	1	8	0	10	901	47	5.22	47	0
Total	0	3034	10	273	56	0	7	21	7	.	17825	291	1.63	272	19

Region=Region 4 (AL, FL, GA, KY, MS, NC, SC, TN)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	9	76	0	5	0	0	0	0	1	39	3902	206	5.28	163	43
201841	9	87	0	9	0	0	0	0	2	38	3911	193	4.93	147	46
201842	9	127	0	4	3	0	0	0	9	39	4685	303	6.47	246	57
201843	9	134	1	7	4	0	0	0	9	38	4923	312	6.34	248	64
201844	12	160	0	11	4	0	0	1	2	34	4850	294	6.06	247	47
201845	11	170	1	7	11	0	0	0	0	35	5091	420	8.25	363	57
201846	11	198	0	15	14	0	0	0	2	34	5333	460	8.63	405	55
201847	11	125	1	11	16	0	0	0	2	35	5371	522	9.72	485	37
201848	12	249	0	25	21	0	0	0	4	34	5570	507	9.10	455	52
201849	11	220	1	19	32	0	0	0	0	34	6026	804	13.34	728	76
201850	11	136	0	22	41	0	0	0	0	32	6775	1408	20.78	1317	91
201851	6	47	2	9	14	0	0	0	0	23	5798	1497	25.82	1417	80
Total	0	1729	6	144	160	0	0	1	31	.	62235	6926	11.13	6221	705

Region=Region 5 (IL, IN, MI, MN, OH, WI)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	10	190	0	2	1	0	0	0	0	64	3208	13	0.41	7	6
201841	10	177	0	10	0	0	0	0	0	64	3570	20	0.56	14	6
201842	10	201	0	3	3	0	0	0	0	63	4024	15	0.37	10	5
201843	10	236	2	7	4	0	1	0	2	63	4246	29	0.68	21	8
201844	9	228	1	13	2	0	0	0	1	65	4370	42	0.96	36	6
201845	9	224	0	14	3	0	1	0	0	64	4518	59	1.31	49	10
201846	9	252	0	21	8	0	0	1	0	64	4850	92	1.90	80	12
201847	12	212	3	20	8	0	0	0	1	63	4657	93	2.00	85	8
201848	11	288	4	31	2	0	0	0	0	61	5377	131	2.44	125	6
201849	9	278	3	32	8	0	2	0	0	60	5504	191	3.47	179	12
201850	9	254	13	36	10	0	2	1	1	30	4811	304	6.32	286	18
201851	8	164	19	20	11	0	1	1	1	26	4805	546	11.36	528	18
Total	0	2704	45	209	60	0	7	3	6	.	53940	1535	2.85	1420	115

Region=Region 6 (AR, LA, NM, OK, TX)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	9	62	0	2	0	0	0	0	0	25	1892	25	1.32	14	11
201841	7	76	0	1	0	0	0	1	0	25	2131	32	1.50	16	16
201842	9	94	0	1	0	0	0	0	0	25	2337	37	1.58	19	18
201843	8	121	0	9	2	0	1	0	0	24	2436	33	1.35	19	14
201844	9	120	0	8	4	0	0	0	0	24	2849	50	1.76	29	21
201845	8	144	0	16	3	0	0	1	0	24	3014	45	1.49	30	15
201846	8	120	0	9	2	0	0	0	0	23	3122	54	1.73	36	18
201847	7	61	0	8	4	0	0	0	1	23	3309	104	3.14	91	13
201848	8	167	0	19	8	0	0	0	1	22	3169	76	2.40	67	9
201849	8	113	0	29	4	0	0	0	0	23	2928	147	5.02	131	16
201850	8	186	1	79	6	0	0	1	1	21	3298	345	10.46	322	23
201851	5	57	0	40	0	0	0	0	0	17	3809	732	19.22	715	17
Total	0	1321	1	221	33	0	1	3	3	.	34294	1680	4.90	1489	191

Region=Region 7 (IA, KS, MO, NE)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	4	35	0	1	0	0	0	0	1	17	942	3	0.32	3	0
201841	4	42	0	0	0	0	0	0	0	17	1011	0	0.00	0	0
201842	6	49	0	1	2	0	0	0	0	17	1144	3	0.26	3	0
201843	5	46	0	2	4	0	0	0	0	17	1202	3	0.25	3	0
201844	6	54	0	0	0	0	0	0	0	17	1238	0	0.00	0	0
201845	5	52	0	2	3	0	0	0	3	15	1298	5	0.39	5	0
201846	5	51	0	4	0	0	0	0	0	15	1037	21	2.03	21	0
201847	3	29	0	4	2	0	0	0	0	15	1331	35	2.63	35	0
201848	6	47	1	5	1	0	0	0	0	15	1622	30	1.85	30	0
201849	5	34	0	2	0	0	0	0	0	14	1657	58	3.50	55	3

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201850	6	52	1	21	2	0	0	0	0	12	1206	120	9.95	119	1
201851	2	35	1	19	0	0	0	0	0	10	1482	162	10.93	162	0
Total	0	526	3	61	14	0	0	0	4	.	15170	440	2.90	436	4

Region=Region 8 (CO, MT, ND, SD, UT, WY)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	7	42	1	4	4	0	0	0	5	14	998	5	0.50	4	1
201841	8	51	0	8	1	0	0	0	1	13	1044	7	0.67	7	0
201842	7	42	0	8	0	0	0	0	0	13	1161	4	0.34	4	0
201843	6	65	0	19	2	0	0	0	0	13	1262	5	0.40	4	1
201844	7	83	0	9	1	0	0	0	2	13	1290	12	0.93	8	4
201845	5	58	0	15	0	0	0	0	0	13	1351	13	0.96	12	1
201846	7	49	0	12	2	0	0	0	0	13	1347	24	1.78	23	1
201847	7	36	0	7	1	0	0	1	0	13	1358	28	2.06	25	3
201848	9	82	0	23	2	0	0	2	1	13	1598	44	2.75	44	0
201849	7	86	0	38	3	0	0	2	1	13	1603	94	5.86	89	5
201850	8	119	0	62	4	0	0	2	2	13	1814	194	10.69	188	6
201851	7	105	0	73	1	0	0	3	0	8	807	144	17.84	144	0
Total	0	818	1	278	21	0	0	10	12	.	15633	574	3.67	552	22

Region=Region 9 (AZ, CA, GU, HI, NV)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	31	105	6	5	4	0	0	0	2	14	669	5	0.75	4	1
201841	29	144	7	9	2	0	4	0	2	13	697	10	1.43	9	1
201842	32	155	11	13	10	0	1	1	3	13	777	10	1.29	5	5
201843	30	118	0	10	8	0	1	0	2	13	812	4	0.49	4	0
201844	30	138	1	21	4	0	0	0	2	14	908	17	1.87	14	3
201845	32	168	13	30	3	0	3	2	2	14	973	16	1.64	14	2
201846	32	227	9	33	8	0	0	0	1	15	1003	16	1.60	16	0
201847	34	211	8	96	11	0	1	0	1	15	1031	42	4.07	41	1
201848	31	287	6	108	13	0	1	0	2	14	1204	76	6.31	73	3
201849	32	286	11	109	10	0	0	0	5	12	1037	140	13.50	135	5
201850	32	251	3	145	5	0	0	0	0	12	1363	273	20.03	269	4
201851	27	105	2	55	3	0	0	0	0	11	854	96	11.24	93	3
Total	0	2195	77	634	81	0	11	3	22	.	11328	705	6.22	677	28

Region=Region 10 (AK, ID, OR, WA)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201840	5	41	0	3	0	0	0	0	1	18	878	8	0.91	7	1
201841	6	64	0	2	3	0	0	0	0	18	962	16	1.66	11	5

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201842	7	57	0	8	0	0	0	0	0	17	1046	9	0.86	6	3
201843	6	61	0	2	4	0	0	0	0	16	1084	9	0.83	6	3
201844	5	88	0	5	2	0	0	0	0	17	946	10	1.06	8	2
201845	6	73	0	4	3	0	0	0	0	18	1222	12	0.98	8	4
201846	6	90	0	5	1	0	0	1	0	17	1191	17	1.43	13	4
201847	6	73	0	3	2	0	0	0	0	17	1317	28	2.13	27	1
201848	6	58	1	14	0	0	0	0	0	16	1509	22	1.46	20	2
201849	6	56	1	10	1	0	0	0	1	16	1522	43	2.83	42	1
201850	6	76	0	47	2	0	0	0	0	14	1567	69	4.40	69	0
201851	3	37	0	26	3	0	1	0	0	11	1538	114	7.41	113	1
Total	0	774	2	129	21	0	1	1	2	.	14782	357	2.42	330	27

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
National (Baseline: 2.2%)
Data as of Friday, December 28, 2018

CDC Week	*# Sites Reporting*	*ILI 0-4 years*	*ILI 5-24 years*	*ILI 25-49 years*	*ILI 50-64 years*	*ILI 65 years and older*	*Total ILI*	*Total Patient Visits*	*% Unweighted ILI*	*% Weighted ILI*
201840	2578	4895	6262	3887	1564	1304	17912	1266575	1.4	1.4
201841	2615	5323	6210	4045	1677	1329	18584	1266217	1.5	1.4
201842	2588	5529	6653	4404	1757	1401	19744	1248696	1.6	1.5
201843	2645	6194	7375	4580	1861	1446	21456	1252332	1.7	1.6
201844	2621	6785	8066	4699	1854	1452	22856	1249651	1.8	1.8
201845	2621	7382	8278	4790	1879	1446	23775	1242602	1.9	1.9
201846	2604	7752	7930	5030	2017	1483	24212	1164458	2.1	2.0
201847	2556	8503	7106	4987	2138	1697	24431	1019128	2.4	2.2
201848	2542	8610	8469	6516	2805	2055	28455	1263138	2.3	2.2
201849	2462	8472	8854	5926	2493	1853	27598	1187366	2.3	2.3
201850	2390	9623	10622	6635	2753	1857	31490	1141758	2.8	2.7
201851	1818	9646	10542	6909	2800	1955	31852	940594	3.4	3.3
Totals							*292365*	*14242515*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 1 (CT, ME, MA, NH, RI, and VT) (Baseline: 1.8%)
Data as of Friday, December 28, 2018

CDC Week	*# Sites Reporting*	*ILI 0-4 years*	*ILI 5-24 years*	*ILI 25-49 years*	*ILI 50-64 years*	*ILI 65 years and older*	*Total ILI*	*Total Patient Visits*	*% Unweighted ILI*	*% Weighted ILI*
201840	171	172	292	165	89	67	785	83378	0.9	1.0
201841	174	167	332	198	96	81	874	83428	1.0	1.1
201842	174	183	326	202	93	89	893	81732	1.1	1.1
201843	176	209	340	188	103	62	902	80918	1.1	1.2
201844	174	164	346	184	82	43	819	79476	1.0	1.1
201845	174	216	342	191	75	62	886	79560	1.1	1.2
201846	176	248	305	179	86	51	869	78996	1.1	1.1
201847	178	260	297	194	88	73	912	64604	1.4	1.5
201848	178	228	358	261	114	74	1035	83277	1.2	1.4
201849	177	293	448	275	108	74	1198	82901	1.4	1.8
201850	172	326	410	304	130	100	1270	78444	1.6	1.9
201851	139	379	435	318	160	112	1404	68443	2.1	2.4

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
Totals							*11847*	*945157*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 2 (NJ, NY, PR, and USVI) (Baseline: 3.1%)
Data as of Friday, December 28, 2018

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	257	1074	1171	770	366	329	3710	206631	1.8	2.3
201841	261	1206	1086	735	404	323	3754	211225	1.8	2.3
201842	259	1278	1214	747	389	325	3953	201297	2.0	2.5
201843	260	1456	1331	732	341	297	4157	195498	2.1	2.6
201844	257	1534	1295	644	299	287	4059	197979	2.1	2.5
201845	260	1596	1231	635	325	231	4018	198008	2.0	2.6
201846	264	1735	1152	665	341	244	4137	186911	2.2	2.8
201847	263	1808	1225	702	344	273	4352	176019	2.5	3.1
201848	262	1761	1249	873	378	308	4569	197433	2.3	2.8
201849	256	2013	1469	827	351	310	4970	193106	2.6	3.3
201850	250	2139	1840	1030	442	325	5776	191754	3.0	3.7
201851	224	2286	2189	1185	469	383	6512	180924	3.6	4.4
Totals							*53967*	*2336785*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 3 (DE, DC, MD, PA, VA, and WV) (Baseline: 2.0%)
Data as of Friday, December 28, 2018

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	352	615	874	554	183	161	2387	187888	1.3	1.0
201841	355	672	943	612	217	155	2599	189302	1.4	1.1
201842	353	721	1017	686	233	179	2836	182777	1.6	1.3
201843	360	760	961	652	243	172	2788	182724	1.5	1.3
201844	355	832	1168	702	259	160	3121	184293	1.7	1.5
201845	344	908	1116	684	258	190	3156	176481	1.8	1.6
201846	332	889	1060	714	254	211	3128	162218	1.9	1.6

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201847	332	1072	944	675	244	220	3155	141948	2.2	1.8
201848	338	1147	1095	955	365	300	3862	196556	2.0	1.7
201849	333	1060	1058	805	319	213	3455	164299	2.1	1.7
201850	318	1115	1126	854	334	187	3616	156579	2.3	2.1
201851	275	1209	1259	967	343	235	4013	151474	2.6	3.4
Totals							*38116*	*2076539*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 4 (AL, FL, GA, KY, MS, NC, SC, and TN) (Baseline: 2.2%)
Data as of Friday, December 28, 2018

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	541	1427	1525	949	267	195	4363	297446	1.5	1.3
201841	544	1524	1455	997	329	232	4537	287666	1.6	1.4
201842	551	1548	1632	1129	381	235	4925	292296	1.7	1.4
201843	566	1761	2013	1316	465	315	5870	294625	2.0	1.7
201844	551	1966	2243	1395	423	297	6324	291784	2.2	1.8
201845	549	2138	2307	1469	441	282	6637	287282	2.3	1.9
201846	553	2131	2321	1554	498	303	6807	265368	2.6	2.0
201847	551	2556	2030	1516	562	339	7003	242402	2.9	2.3
201848	550	2485	2525	1983	714	445	8152	300471	2.7	2.2
201849	538	2306	2543	1846	620	408	7723	284541	2.7	2.3
201850	522	2763	3286	1963	712	437	9161	272529	3.4	2.7
201851	435	2882	3573	2326	815	501	10097	248290	4.1	3.4
Totals							*81599*	*3364700*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 5 (IL, IN, MI, MN, OH, and WI) (Baseline: 1.8%)
Data as of Friday, December 28, 2018

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	318	287	491	247	122	80	1227	125855	1.0	1.0
201841	320	306	593	268	128	83	1378	125764	1.1	1.1

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201842	323	326	522	281	141	110	1380	128311	1.1	1.0
201843	325	408	558	298	159	125	1548	130732	1.2	1.2
201844	324	444	684	325	128	124	1705	129248	1.3	1.3
201845	320	458	657	278	119	146	1658	129539	1.3	1.3
201846	317	467	556	324	137	111	1595	118506	1.3	1.3
201847	272	431	423	267	120	113	1354	88100	1.5	1.6
201848	266	510	584	353	151	147	1745	114807	1.5	1.6
201849	268	521	576	300	131	139	1667	112122	1.5	1.5
201850	260	621	646	313	148	131	1859	108113	1.7	1.8
201851	169	556	472	265	122	103	1518	62576	2.4	2.5
Totals							*18634*	*1373673*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 6 (AR, LA, NM, OK, and TX) (Baseline: 4.0%)
Data as of Friday, December 28, 2018

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	286	700	837	451	198	137	2323	115934	2.0	2.3
201841	289	716	676	552	195	103	2242	116717	1.9	2.0
201842	290	741	787	536	184	138	2386	109749	2.2	2.1
201843	290	853	959	637	205	140	2794	114626	2.4	2.5
201844	287	1012	969	661	215	155	3012	113493	2.7	2.8
201845	292	1067	1117	696	224	164	3268	114574	2.9	3.0
201846	292	1276	1107	739	275	190	3587	110555	3.2	3.3
201847	286	1333	914	789	323	205	3564	97905	3.6	3.6
201848	286	1361	1101	929	416	256	4063	119069	3.4	3.4
201849	279	1188	1070	764	304	201	3527	111498	3.2	3.3
201850	267	1288	1265	816	276	189	3834	104689	3.7	3.9
201851	226	1270	1243	939	378	244	4074	92064	4.4	4.4
Totals							*38674*	*1320873*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 7 (IA, KS, MO, and NE) (Baseline: 1.6%)
Data as of Friday, December 28, 2018

CDC Week	*# Sites Reporting*	*ILI 0-4 years*	*ILI 5-24 years*	*ILI 25-49 years*	*ILI 50-64 years*	*ILI 65 years and older*	*Total ILI*	*Total Patient Visits*	*% Unweighted ILI*	*% Weighted ILI*
201840	114	77	114	41	14	19	265	28398	0.9	0.8
201841	117	110	163	57	19	28	377	32724	1.2	0.9
201842	85	58	98	55	18	16	245	27269	0.9	0.9
201843	116	117	177	70	25	21	410	32900	1.2	1.1
201844	118	125	186	54	34	20	419	30785	1.4	1.4
201845	118	143	190	64	19	21	437	30802	1.4	1.3
201846	119	137	185	57	25	21	425	31487	1.3	1.0
201847	121	150	169	66	34	30	449	25542	1.8	1.4
201848	112	111	144	57	38	33	383	26074	1.5	1.6
201849	80	80	111	60	33	27	311	25893	1.2	1.6
201850	77	106	185	65	26	30	412	23367	1.8	2.7
201851	48	105	93	69	32	32	331	16653	2.0	3.0
Totals							*4464*	*331894*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 8 (CO, MT, ND, SD, UT, and WY) (Baseline: 2.2%)
Data as of Friday, December 28, 2018

CDC Week	*# Sites Reporting*	*ILI 0-4 years*	*ILI 5-24 years*	*ILI 25-49 years*	*ILI 50-64 years*	*ILI 65 years and older*	*Total ILI*	*Total Patient Visits*	*% Unweighted ILI*	*% Weighted ILI*
201840	218	293	460	376	145	118	1392	93655	1.5	1.5
201841	224	335	493	310	136	134	1408	90065	1.6	1.6
201842	224	402	512	429	135	139	1617	94809	1.7	1.8
201843	227	371	496	371	167	135	1540	94222	1.6	1.7
201844	228	368	534	396	179	168	1645	92898	1.8	1.8
201845	229	448	632	426	166	146	1818	94313	1.9	2.0
201846	226	433	571	422	175	129	1730	88341	2.0	2.2
201847	225	476	531	397	163	141	1708	77937	2.2	2.3
201848	226	533	643	561	266	197	2200	94461	2.3	2.5
201849	221	541	705	551	283	201	2281	91103	2.5	2.7
201850	221	715	978	756	331	233	3013	90490	3.3	3.5
201851	175	658	780	606	284	217	2545	68606	3.7	4.7

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
Totals							*22897*	*1070900*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 9 (AZ, CA, HI, and NV) (Baseline: 2.3%)
Data as of Friday, December 28, 2018

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	193	175	374	224	149	167	1089	81408	1.3	1.4
201841	198	175	336	205	120	148	984	80323	1.2	1.3
201842	195	181	408	221	148	130	1088	82584	1.3	1.4
201843	194	185	416	216	117	131	1065	78880	1.4	1.4
201844	199	230	492	239	192	160	1313	83862	1.6	1.6
201845	205	268	518	242	209	181	1418	85190	1.7	1.8
201846	196	282	488	245	176	183	1374	75930	1.8	2.0
201847	200	260	398	230	204	240	1332	62886	2.1	2.1
201848	201	330	591	386	299	245	1851	85207	2.2	2.3
201849	187	306	696	346	294	234	1876	78420	2.4	2.5
201850	181	377	666	358	289	165	1855	71999	2.6	2.8
201851	95	287	476	218	187	125	1293	44627	2.9	2.8
Totals							*16538*	*911316*		

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)
2017-2018 Influenza Season
HHS Region 10 (AK, ID, OR, and WA) (Baseline: 1.1%)
Data as of Friday, December 28, 2018

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201840	128	75	124	110	31	31	371	45982	0.8	0.6
201841	133	112	133	111	33	42	431	49003	0.9	0.7
201842	134	91	137	118	35	40	421	47872	0.9	0.6
201843	131	74	124	100	36	48	382	47207	0.8	0.6
201844	128	110	149	99	43	38	439	45833	1.0	0.7
201845	130	140	168	105	43	23	479	46853	1.0	0.7

CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
201846	129	154	185	131	50	40	560	46146	1.2	0.9
201847	128	157	175	151	56	63	602	41785	1.4	1.0
201848	123	144	179	158	64	50	595	45783	1.3	1.0
201849	122	162	178	151	50	46	587	43165	1.4	1.0
201850	122	173	220	176	65	60	694	43794	1.6	1.1
201851	31	14	22	16	10	3	65	6781	1.0	1.0
Totals							*5626*	*510204*		

Geographic Spread of Influenza Reported by State and Territorial Health Departments
2018-2019 Influenza Season Week 51 (December 16 - 22, 2018)

Region	*State*	*Week 47*	*Week 48*	*Week 49*	*Week 50*	*Week 51*
1	Connecticut	REGIONAL	REGIONAL	REGIONAL	REGIONAL	WIDESPR
	Maine	SPORADIC	SPORADIC	SPORADIC	SPORADIC	SPORADIC
	Massachusetts	REGIONAL	WIDESPR	WIDESPR	WIDESPR	WIDESPR
	New Hampshire	LOCAL	LOCAL	SPORADIC	REGIONAL	REGIONAL
	Rhode Island	SPORADIC	SPORADIC	REGIONAL	REGIONAL	REGIONAL
	Vermont	SPORADIC	REGIONAL	REGIONAL	REGIONAL	REGIONAL
2	New Jersey	LOCAL	LOCAL	LOCAL	REGIONAL	REGIONAL
	New York	LOCAL	REGIONAL	REGIONAL	WIDESPR	WIDESPR
	Puerto Rico	SPORADIC	SPORADIC	SPORADIC	SPORADIC	REGIONAL
	Virgin Islands	SPORADIC	SPORADIC	SPORADIC	SPORADIC	SPORADIC
3	Delaware	SPORADIC	LOCAL	LOCAL	WIDESPR	WIDESPR
	District of Columbia	SPORADIC	SPORADIC	SPORADIC	SPORADIC	SPORADIC
	Maryland	SPORADIC	SPORADIC	LOCAL	LOCAL	NO. REPT.
	Pennsylvania	LOCAL	LOCAL	LOCAL	REGIONAL	REGIONAL
	Virginia	NONE	SPORADIC	SPORADIC	REGIONAL	LOCAL
	West Virginia	SPORADIC	LOCAL	SPORADIC	SPORADIC	LOCAL
4	Alabama	SPORADIC	SPORADIC	LOCAL	WIDESPR	REGIONAL
	Florida	LOCAL	LOCAL	LOCAL	REGIONAL	WIDESPR
	Georgia	LOCAL	REGIONAL	WIDESPR	WIDESPR	WIDESPR
	Kentucky	REGIONAL	REGIONAL	REGIONAL	REGIONAL	REGIONAL
	Mississippi	SPORADIC	SPORADIC	SPORADIC	LOCAL	LOCAL
	North Carolina	SPORADIC	LOCAL	REGIONAL	REGIONAL	WIDESPR
	South Carolina	LOCAL	LOCAL	LOCAL	LOCAL	REGIONAL
	Tennessee	LOCAL	SPORADIC	LOCAL	LOCAL	NO. REPT.
5	Illinois	SPORADIC	LOCAL	LOCAL	LOCAL	REGIONAL
	Indiana	SPORADIC	SPORADIC	SPORADIC	LOCAL	REGIONAL
	Michigan	SPORADIC	LOCAL	LOCAL	LOCAL	LOCAL
	Minnesota	SPORADIC	SPORADIC	LOCAL	LOCAL	LOCAL
	Ohio	LOCAL	LOCAL	LOCAL	REGIONAL	REGIONAL
	Wisconsin	SPORADIC	SPORADIC	SPORADIC	SPORADIC	LOCAL
6	Arkansas	SPORADIC	SPORADIC	SPORADIC	LOCAL	LOCAL
	Louisiana	LOCAL	REGIONAL	LOCAL	LOCAL	REGIONAL
	New Mexico	SPORADIC	SPORADIC	LOCAL	REGIONAL	WIDESPR
	Oklahoma	LOCAL	LOCAL	LOCAL	LOCAL	REGIONAL
	Texas	LOCAL	LOCAL	REGIONAL	REGIONAL	REGIONAL

Region	*State*	*Week 47*	*Week 48*	*Week 49*	*Week 50*	*Week 51*
7	Iowa	SPORADIC	SPORADIC	SPORADIC	LOCAL	LOCAL
	Kansas	SPORADIC	SPORADIC	LOCAL	LOCAL	LOCAL
	Missouri	SPORADIC	SPORADIC	SPORADIC	LOCAL	LOCAL
	Nebraska	SPORADIC	SPORADIC	LOCAL	REGIONAL	WIDESPR
8	Colorado	SPORADIC	LOCAL	LOCAL	LOCAL	REGIONAL
	Montana	SPORADIC	LOCAL	LOCAL	LOCAL	REGIONAL
	North Dakota	SPORADIC	SPORADIC	SPORADIC	LOCAL	LOCAL
	South Dakota	SPORADIC	SPORADIC	SPORADIC	SPORADIC	LOCAL
	Utah	REGIONAL	LOCAL	LOCAL	LOCAL	REGIONAL
	Wyoming	SPORADIC	SPORADIC	SPORADIC	LOCAL	LOCAL
9	Arizona	LOCAL	LOCAL	REGIONAL	REGIONAL	WIDESPR
	California	LOCAL	REGIONAL	WIDESPR	WIDESPR	WIDESPR
	Guam	NONE	NO. REPT.	NO. REPT.	WIDESPR	WIDESPR
	Hawaii	SPORADIC	SPORADIC	SPORADIC	SPORADIC	SPORADIC
	Nevada	SPORADIC	REGIONAL	REGIONAL	REGIONAL	REGIONAL
10	Alaska	LOCAL	SPORADIC	SPORADIC	SPORADIC	SPORADIC
	Idaho	LOCAL	REGIONAL	REGIONAL	REGIONAL	REGIONAL
	Oregon	REGIONAL	REGIONAL	LOCAL	REGIONAL	LOCAL
	Washington	SPORADIC	SPORADIC	SPORADIC	SPORADIC	LOCAL

NCHS Mortality Surveillance Data
Data as of December 27, 2018
For the Week Ending December 15, 2018 (Week 50)

YEAR	WEEK	% OF DEATHS	EXPECTED	THRESH.	TOTAL DEATHS	PNEUMONIA DEATHS	INFLUENZA DEATHS
2018	38	5.45	5.34	5.68	50427	2739	10
2018	39	5.51	5.40	5.74	49838	2731	13
2018	40	5.61	5.48	5.81	51153	2862	10
2018	41	5.50	5.56	5.89	50166	2748	12
2018	42	5.54	5.64	5.98	50393	2776	17
2018	43	5.70	5.74	6.07	50647	2864	21
2018	44	5.57	5.83	6.17	49723	2745	23
2018	45	5.58	5.94	6.28	48841	2702	24
2018	46	5.80	6.04	6.38	48737	2801	24
2018	47	5.75	6.15	6.48	47546	2704	31
2018	48	5.95	6.25	6.59	45933	2700	32
2018	49	6.00	6.35	6.69	42335	2496	42
2018	50	6.19	6.45	6.79	32030	1949	34

NORTHWEST HEALTHCARE Response Network

WEBINAR

Acute Infectious Disease

Microbiological Diagnosis: Cool Gadgets are just getting Better!

Thursday
January 10, 2019
10:00 a.m. – 11:30 a.m.

Presented by:

Jacky Chow, Ph.D., D(ABMM)
Technical Director, Infectious Diseases Diagnostics, MultiCare Health System

Scott Lindquist, M.D., MPG
State Epidemiologist for Communicable Diseases, Washington State Department of Health

NWHRN is a nonprofit corporation and 501(c)(3) organization.

7100 Fort Dent Way, Suite 210,
Tukwila, WA 98188
425-988-2898
info@nwhrn.org | nwhrn.org

The Northwest Healthcare Response Network, in partnership with healthcare and public health colleagues across Western Washington, is hosting a training seminar on new and emerging diagnostic tools to better detect special pathogens and other infectious diseases of public health importance ranging from hemorrhagic fevers to acute flaccid myelitis.

Following the devastating 2014-15 West Africa Ebola outbreak, this webinar will provide microbiology guidance on new technology platforms, disease and drug-resistant organisms and clinical practices for healthcare and public health officials concerned with current and future diseases.

Topics will include:

- Culture-independent diagnostic tests
- PCR-based rapid detection of M. tuberculosis
- and other public health threats
- Public health and healthcare perspectives
- Current and emerging disease threats

Who should attend:

- Healthcare staff (medical, nursing, ancillary, administrative) from inpatient and outpatient facilities
- Public health communicable disease/epidemiology and preparedness officials

Register now:
https://zoom.us/webinar/register/WN_jVK3m50yRFWUy2_pZUeTIw

NWHRN is a healthcare coalition, which is an affiliation of private and public partners working together to prepare for, respond to and recover from emergencies. Through collaborative planning, training, exercises and coordination of resources, the Network leads a regional effort to build a disaster-resilient healthcare system.

КІР

КІР Є СЕРЙОЗНИМ ЗАХВОРЮВАННЯМ

Кір є серйозним захворюванням, що викликає висип і лихоманку.

Кір дуже заразний. Він поширюється, коли людина з кору видихає, кашляє чи чхає.

Ті, хто не вакциновані, набагато частіше захворюють на кір.

Кір може бути небезпечним, особливо для немовлят та маленьких дітей. Він може викликати набряк мозку та легеневі захворювання. У рідкісних випадках це може бути смертельно.

ВАКЦИНАЦІЯ Є НАЙКРАЩИМ СПОСОБОМ ЗАХИСТУ ВАШОЇ РОДИНИ

Вакцинація MMR є безпечним та дуже ефективним у запобіганні кору. Вона також захищає від паротиту та краснухи.

Лікарі рекомендують всім дітям вакцинуватися MMR.

Вакцинація MMR безпечніше, ніж захворювання на кір.

Більшість дітей не мають побічних ефектів від вакцинації. Побічні ефекти, які відбуваються, як правило, є м'якими і не тривають довго, наприклад, лихоманка, легка висипка та болючість.

Images: cdc.gov

ВАКЦИНА MMR НЕ ВИКЛИКАЄ АУТИЗМ

Жодне з досліджень не виявило зв'язку між аутизмом та вакциною MMR. Це було ретельно вивчено багатьма лікарями та науковцями з усього світу.

Вчені вивчають, що робить дитину більш схильною до аутизму. Більшість вчених погоджується, що аутизм, ймовірно, є результатом поєднання сімейних генів та подій до і після народження. Це може включати вік батьків під час народження, хвороби матері під час вагітності або труднощі при народженні. Вони також вивчають зв'язки між аутизмом і місцем проживання людини.

Спитайте свого лікаря, якщо у вас є питання про кір або вакцину MMR.

Для отримання додаткової інформації:
www.doh.wa.gov/measles
www.kingcounty.gov/measles

Somali Health Board
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Public Health
Seattle & King County

Washington State Department of Health

ЩО РОБИТИ, ЯКЩО, НА ВАШУ ДУМКУ, ВИ ЗАХВОРІЛИ НА КІР

Симптоми кору і як він поширюється

Кір часто починається з високої температури, кашлю, нежитю і червоних, водянистих очей.
За 3-5 днів висип зазвичай починається на обличчі і поширюється на інші частини тіла.

Ви можете поширювати кір на інших, як тільки у вас з'явилися симптоми. Ви будете заразні, поки висип не зникне.

Ви можете захворіти ні кір, просто перебуваючи в приміщенні, де знаходиться або була людина, вже хвора на кір. Вірус кору залишається в повітрі протягом двох годин після того, як ця особа вийшла з кімнати.

Негайно зателефонуйте до лікаря або в клініку, якщо ви побачите симптоми

Ваш лікар або персонал клініки повідомить вам, якщо вам потрібно приїхати.

Кір дуже заразний, і ви можете заразити когось у залі очікування. Важливо сказати своєму лікарю або в клініці, що у вас є симптоми кору, **перш ніж** ви підете. Вони дадуть вам інструкції щодо того, що потрібно зробити, щоб ви не поширювали кір.

Залишайтеся вдома, якщо у вас кір

Важливо не поширювати кір на інших.

Залишайтеся вдома, якщо у вас кір. Не йдіть до школи, на роботу, в магазин чи в гості.

Вам не слід приймати відвідувачів у вашому домі, якщо у вас або у вашої дитини лихоманка або висип.

Для отримання додаткової інформації:
www.doh.wa.gov/measles
www.kingcounty.gov/measles

Public Health
Seattle & King County

Somali Health Board
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Washington State Department of Health

DOH 348-651, August 2017

Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Weekly / Vol. 67 / No. 50
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Health Care, Family, and Community Factors Associated with Mental, Behavioral, and Developmental Disorders and Poverty Among Children Aged 2–8 Years — United States, 2016

Robyn A. Cree, PhD[1,2]; Rebecca H. Bitsko[2]; PhD; Lara R. Robinson, PhD[2]; Joseph R. Holbrook, PhD[2]; Melissa L. Danielson, MSPH[2]; Camille Smith, EdS[3]; Jennifer W. Kaminski, PhD[2]; Mary Kay Kenney, PhD[4]; Georgina Peacock, MD[2]

Childhood mental, behavioral, and developmental disorders (MBDDs) are associated with adverse outcomes that can persist into adulthood (*1*,*2*). Pediatric clinical settings are important for identifying and treating MBDDs (*3*). Early identification and treatment of MBDDs can promote healthy development for all children (*4*), especially those living in poverty who are at increased risk for MBDDs (*3*,*5*) but might have reduced access to care (*6*). CDC analyzed data from the 2016 National Survey of Children's Health (NSCH) on MBDDs, risk factors, and use of federal assistance programs (e.g., Supplemental Nutrition Assistance Program [SNAP]) to identify points to reach children in poverty. In line with previous research (*3*,*6*), compared with children in higher-income households, those in lower-income households more often had ever received a diagnosis of an MBDD (22.1% versus 13.9%), and less often had seen a health care provider in the previous year (80.4% versus 93.8%). Among children living below 200% of the federal poverty level (FPL) who did not see a health care provider in the previous year, seven of 10 were in families receiving at least one public assistance benefit. Public assistance programs might offer collaboration opportunities to provide families living in poverty with information, co-located screening programs or services, or connection to care.

NSCH is a national, cross-sectional, web-based and paper-based survey funded and directed by the Health Resources and Services Administration's Maternal and Child Health Bureau that is representative of noninstitutionalized children aged 0–17 years in the United States.* The U.S. Census Bureau conducted the 2016 NSCH using address-based sampling and created weights to account for oversampling and potential nonresponse biases.† Parents were asked, "Has a doctor or other health care provider ever told you that this child has (specified MBDDs)?" A child was considered to have ever had an MBDD if their parent reported one or more of the following: anxiety problems, depression, attention-deficit/hyperactivity disorder, behavioral or conduct problems, Tourette syndrome, autism spectrum disorder, learning disability, intellectual disability, developmental delay, or language problems. Parents also responded to questions related to factors associated with

* https://mchb.hrsa.gov/data/national-surveys/data-user.

† https://census.gov/content/dam/Census/programs-surveys/nsch/tech-documentation/nonresponse-bias-analysis/NSCH%202016%20Nonresponse%20Bias%20Analysis.pdf.

INSIDE

Continuing Education examination available at https://www.cdc.gov/mmwr/cme/conted_info.html#weekly.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

MBDDs (*1*,*3*), including household income, health insurance, components of a medical home, difficulty getting by on the family's income, parent emotional support, neighborhood condition (e.g., litter or vandalism), neighborhood amenities (e.g., sidewalks or parks), and parental mental or physical health, as well as whether they received public assistance (e.g., SNAP; Women, Infants, and Children [WIC]; free or reduced price meals at school; or cash assistance).[§]

Parents of 50,212 children participated in the survey, resulting in an interview completion rate of 69.7% and a weighted response rate of 40.7%. Analyses were restricted to children aged 2–8 years with nonmissing data on MBDD diagnosis and age (16,912 children). Data missing on race (0.3%), ethnicity (0.5%), sex (0.1%), and FPL (16.6%) were imputed using hot-deck imputation (a method for handling missing data in which missing values are replaced with observed responses from "similar" units) and regression methods.[¶] Differences in demographic, health care, family, and community factors by MBDD status were assessed using weighted prevalence estimates, prevalence ratios (PRs), 95% confidence intervals (CIs), and Wald chi-square tests. Prevalence of MBDDs, health care, family, and community factors were compared by FPL category. Weighted prevalence estimates, PRs, and 95% CIs were calculated. To further explore whether federal assistance programs are possible points to reach children living in poverty, 4,410 children living below 200% of the FPL who had and had not seen a health care provider in the past year, both with and without MBDDs, were compared by whether their families received public assistance. Statistical software was used to account for the complex survey design.

Overall, 17.4% of children aged 2–8 years had at least one MBDD (Table 1). Child sex, age, and race/ethnicity varied by MBDD status. Compared with children without MBDDs, those with MBDDs more often lived in the lowest income category (<100% of FPL; PR = 1.4) and less often in the highest category (≥400% of FPL; PR = 0.8). Prevalences of most risk factors (e.g., child care problems, and lack of support in neighborhood) were higher among children with MBDDs than among those without MBDDs.

Prevalence of MBDDs was higher in each consecutive decreasing income level compared with the highest level (≥400% of FPL) (Table 2); estimates of MBDDs ranged from 13.9% among those in the highest income level (≥400% of FPL) to 22.1% among those in the lowest level (<100% of FPL). A lower percentage of children in lower-income households saw a health care provider in the past 12 months (80.4%) and a higher percentage did not receive needed care (5%), compared with children in the highest income level (93.8% and 0.8%, respectively). Similar patterns across income levels were found for most health care, family, and community factors (e.g., increasing prevalences of the risk factors as household

[§] https://www.census.gov/programs-surveys/nsch/technical-documentation/codebooks.html.

[¶] https://census.gov/content/dam/Census/programs-surveys/nsch/tech-documentation/methodology/2016-NSCH-Methodology-Report.pdf.

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TABLE 1. Prevalence of demographic, health care, family, and community factors, by ever having any mental, behavioral, or developmental disorder (MBDD)* among children aged 2–8 years — National Survey of Children's Health, United States, 2016

Characteristic	Any MBDD % (95% CI)†	No MBDD % (95% CI)†	Any MBDD/No MBDD prevalence ratio (95% CI)	p-value§
Overall	**17.4 (16.2–18.7)**	**82.6 (81.3–83.8)**	—	—
Child sex				
Male¶	66.7 (63.0–70.1)	47.8 (46.0–49.6)	1.4 (1.3–1.5)	<0.001§
Child age group (yrs)				
2–3	18.0 (15.1–21.3)	30.4 (28.9–32.0)	0.6 (0.5–0.7)	<0.001§
4–5	25.0 (21.7–28.5)	29.2 (27.6–30.9)	0.9 (0.7–1.0)	0.028§
6–8	57.0 (53.1–60.8)	40.4 (38.5–42.2)	1.4 (1.3–1.5)	<0.001§
Child race/ethnicity**				
White, non-Hispanic	53.6 (49.6–57.5)	51.7 (49.9–53.6)	1.0 (1.0–1.1)	0.405
Black, non-Hispanic	13.8 (11.2–16.9)	11.5 (10.3–12.8)	1.2 (1.0–1.5)	0.137
Hispanic	24.2 (20.1–28.7)	24.4 (22.4–26.5)	1.0 (0.8–1.2)	0.940
Other, non-Hispanic	8.4 (7.1–10.0)	12.4 (11.5–13.5)	0.7 (0.6–0.8)	<0.001§
Parent education				
Less than high school	8.7 (6.0–12.4)	7.7 (6.2–9.5)	1.1 (0.7–1.7)	0.577
High school	19.9 (16.7–23.6)	17.2 (15.6–18.8)	1.2 (1.0–1.4)	0.154
More than high school	71.4 (67.1–75.3)	75.2 (73.1–77.1)	0.9 (0.9–1.0)	0.107
Language				
Primary language other than English	11.0 (7.8–15.4)	15.5 (13.7–17.4)	0.7 (0.5–1.0)	0.035§
Urban/Rural designations††				
Urban	89.6 (87.6–91.3)	91.1 (90.4–91.8)	1.0 (1.0–1.0)	0.136
Large rural	6.2 (4.8–8.0)	5.1 (4.6–5.7)	1.2 (0.9–1.6)	0.198
Small rural	2.6 (1.9–3.5)	2.2 (1.9–2.5)	1.2 (0.9–1.7)	0.302
Isolated	1.6 (1.1–2.4)	1.6 (1.3–2.0)	1.0 (0.6–1.5)	0.960
Federal poverty level§§				
≥400%	22.9 (19.8–26.3)	29.8 (28.2–31.5)	0.8 (0.7–0.9)	0.001§
200%–399%	27.0 (22.8–31.7)	28.7 (27.0–30.4)	0.9 (0.8–1.1)	0.488
100%–199%	24.2 (20.4–28.4)	22.3 (20.5–24.2)	1.1 (0.9–1.3)	0.409
<100%	25.9 (22.1–30.0)	19.2 (17.4–21.1)	1.4 (1.1–1.6)	0.002§
Health care				
Inadequate or no insurance¶¶	33.8 (30.2–37.7)	25.4 (23.9–27.1)	1.3 (1.2–1.5)	<0.001§
Public insurance***	51.1 (47.2–54.9)	34.4 (32.5–36.3)	1.5 (1.4–1.6)	<0.001§
Lacks a medical home†††	58.1 (54.3–61.8)	48.2 (46.3–50.0)	1.2 (1.1–1.3)	<0.001§
Child saw health care provider in past year§§§	90.0 (86.3–92.7)	87.6 (86.1–88.9)	1.0 (1.0–1.1)	0.174
Needed care not received¶¶¶	7.0 (5.1–9.4)	1.7 (1.1–2.5)	4.2 (2.5–6.9)	<0.001§
Family				
Fair or poor parental mental health****	13.7 (10.9–17.1)	5.7 (4.9–6.7)	2.4 (1.8–3.2)	<0.001§
Fair or poor parental physical health††††	15.7 (12.8–19.2)	8.1 (7.0–9.2)	2.0 (1.5–2.5)	<0.001§
Difficult to get by on family's income§§§§	38.0 (34.2–42.0)	21.3 (19.7–22.9)	1.8 (1.6–2.0)	<0.001§
Parent lacks emotional support¶¶¶¶	21.2 (17.9–24.9)	23.3 (21.4–25.3)	0.9 (0.8–1.1)	0.299
Child care problems (ages 0–5 only)*****	18.8 (13.8–25.2)	5.3 (4.4–6.3)	3.5 (2.5–5.0)	<0.001§
Community				
Neighborhood without amenities†††††	65.2 (61.3–68.9)	60.3 (58.5–62.0)	1.1 (1.0–1.2)	0.023§
Neighborhood in poor condition§§§§§	26.8 (23.4–30.6)	24.5 (22.8–26.2)	1.1 (0.9–1.3)	0.245
Lack of support in neighborhood¶¶¶¶¶	35.7 (31.7–39.9)	26.5 (24.7–28.4)	1.3 (1.2–1.5)	<0.001§
Neighborhood perceived to lack safety******	6.8 (4.8–9.5)	5.4 (4.4–6.6)	1.3 (0.8–1.9)	0.300

See table footnotes on the next page.

income level decreased), with the exception that inadequate insurance was less often reported for children in the lower income levels than for those in the highest level.

Among children living at <200% of FPL, 82.6% saw a health care provider in the past year, and 73.4% received public assistance (Table 3). Among the children who did not see a health care provider in the past year, 69.0% received public assistance and 19.2% had a diagnosed MBDD. Among children who did not see a health care provider in the past year and had a diagnosed MBDD, 81.7% received public assistance. Of children who did not see a health care provider in the past year and did not have a diagnosed MBDD, 66.0% received public assistance.

Discussion

Consistent with previous studies (*3*,*5*,*7*), this study found that children living in lower-income households had higher prevalences of a parent-reported diagnosis of an MBDD and

TABLE 1. (*Continued*) Prevalence of demographic, health care, family, and community factors, by ever having any mental, behavioral, or developmental disorder (MBDD)* among children aged 2–8 years — National Survey of Children's Health, United States, 2016

Abbreviation: CI = confidence interval.

* Based on a response of "yes" to whether "a doctor or other health care provider ever told you that this child has" one or more of the following disorders: "anxiety problems, depression, attention-deficit/hyperactivity disorder, behavioral or conduct problems, Tourette syndrome, autism spectrum disorder, learning disability, intellectual disability, developmental delay, or speech or other language disorder."

† Percentages are weighted. Column percentages might not sum to 100% because of rounding.

§ p-value for weighted Wald chi-square test. All p-values <0.05 indicate statistically significant differences from "No MBDD."

¶ Missing data on sex were imputed for 0.1% of the sample using hot-deck imputation methods.

** Missing data on race and ethnicity were imputed for 0.3% and 0.5% of the sample, respectively, using hot-deck imputation methods. "Other, non-Hispanic" includes American Indian/Alaska Native, Native Hawaiian or Other Pacific Islander, and Asian.

†† Urban and rural designations were determined using a four-category classification based on 2010 rural-urban community area codes (RUCAs), a census tract–based classification system. Urban areas (RUCA codes 1.0, 1.1, 2.0, 2.1, 3.0, 4.1, 5.1, 7.1, 8.1, and 10.1) include metropolitan areas and surrounding towns from which commuters flow to an urban area; large rural areas (RUCA codes 4.0, 5.0, and 6.0) include large towns (micropolitan areas) with populations of 10,000–49,999 and their surrounding areas; small rural areas (RUCA codes 7.0, 7.2, 8.0, 8.2, and 9.0) include small towns with populations of 2,550–9,999 and up to 50% secondary flow to a large urban cluster of up to 50,000; and isolated areas (RUCA codes 10.0, 10.2, and 10.3) with less than 2,500 population and up to 50% secondary flow to a large or small urban cluster (population up to 10,000). (https://www.census.gov/geo/reference/ua/urban-rural-2010.html).

§§ Federal poverty level is based on family income and family size and composition using federal poverty thresholds that are updated annually by the U.S. Census Bureau using the change in the average annual consumer price index for all urban consumers. Imputed income was used for 16.6% of children aged 2–8 years with MBDD status and sex reported, but without reported household income, using regression methods.

¶¶ Based on a negative value for any of four variables based on these questions: 1) "Is this child currently covered by any kind of health insurance or health coverage plan?" 2) "How often does this child's health insurance offer benefits or cover services that meet this child's needs?" 3) "Does the family pay out-of-pocket expenses," and if yes, "How often are these costs reasonable?" and 4) "How often does this child's health insurance allow him or her to see the health care providers he or she needs?"

*** Based on a response of "yes" to having "Medicaid, Medical Assistance, or any kind of government assistance plan for those with low incomes or a disability."

††† Based on five component variables (personal doctor or nurse, usual source for sick and well care, family-centered care, problems getting needed referrals, satisfaction with communication, and effective care coordination when needed), derived from 16 survey items. To have a medical home, the child must have a personal doctor or nurse, usual source of care, and family-centered care; children needing referrals or care coordination must also have those criteria met.

§§§ Whether the child saw a health care provider in the last 12 months was based on a response of "yes" to the following question: "During the past 12 months, did this child see a doctor, nurse, or other health care professional for sick-child care, well-child check-ups, physical exams, hospitalizations, or any other kind of medical care?"

¶¶¶ Based on a response of "yes" to the following question: "During the past 12 months, was there any time when this child needed health care, but it was not received? By health care, we mean medical care as well as other kinds of care like dental care, vision care, and mental health services."

**** Based on whether either parent reported "fair" or "poor" (i.e., compared with "excellent," "very good," or "good") to the question "In general, how is your mental or emotional health?"

†††† Based on whether either parent reported "fair" or "poor" (i.e., compared with "excellent," "very good," or "good") to the question: "In general, how is your physical health?"

§§§§ Based on an answer of "very often" or "somewhat often" (i.e., compared with "never" or "rarely") to the question: "Since this child was born, how often has it been very hard to get by on your family's income (e.g., hard to cover the basics like food or housing)?"

¶¶¶¶ Based on a response of "no" to the question "During the past 12 months, was there someone that you could turn to for day-to-day emotional support with parenting or raising children?"

***** Based on a response of "yes" to the question: "During the past 12 months, did you or anyone in the family have to quit a job, not take a job, or greatly change your job because of problems with child care for (child)?". Note: This question was asked for children aged 0-5 years only.

††††† Based on a response of "no" to any of the following four questions: "In your neighborhood, is/are there: 1) sidewalks or walking paths?; 2) a park or playground?; 3) a recreation center, community center, or boys' and girls' club?; 4) a library or bookmobile?"

§§§§§ Based on a response of "yes" to any of the following three questions: "In your neighborhood, is/are there: 1) litter or garbage on the street or sidewalk?; 2) poorly kept or rundown housing?; 3) vandalism such as broken windows or graffiti?"

¶¶¶¶¶ Based on a response of "definitely disagree" or "somewhat disagree" (i.e., compared with "definitely agree" or "somewhat agree") to any of the following three questions: "To what extent do you agree with these statements about your neighborhood or community? 1) People in this neighborhood help each other out; 2) We watch out for each other's children in this neighborhood; 3) When we encounter difficulties, we know where to go for help in our community."

****** Based on a response of "definitely disagree" or "somewhat disagree" (i.e., compared with "definitely agree" or "somewhat agree") to the following statement: "This child is safe in our neighborhood."

other health care, family, and community risk factors associated with MBDDs than did children living in higher-income households. Most children had seen a health care provider in the past year regardless of income level; therefore, the American Academy of Pediatrics recommendation to screen for MBDDs (*8*) and family and socioeconomic risk factors (*4*) during primary care visits appears to be theoretically feasible.

Screening**,†† in health care settings can be challenging in practice, and MBDDs might be underdiagnosed even among children who have recently seen a health care provider (*9*). Children living in lower-income households had lower prevalences of having seen a health care provider in the past year and of receiving needed health care compared with children living in higher-income households. Approximately one in five children living at <200% of FPL who did not see a health care provider in the past year had a diagnosed MBDD. This, coupled with families with lower incomes reporting greater difficulty receiving needed health care, raises concern that MBDDs might be undertreated in this population. Additionally, families living in poverty were more likely to experience a range of risk factors related to MBDDs; therefore, connections to health care services are especially relevant for this population.

** https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Screening/Pages/default.aspx.

†† https://eclkc.ohs.acf.hhs.gov/publication/birth-5-watch-me-thrive-compendium-screening-measures-young-children.

TABLE 2. Prevalence of parental report of any mental, behavioral, or developmental disorder (MBDD), and health care, family, and community factors among children aged 2–8 years, by federal poverty level — National Survey of Children's Health, United States, 2016

	Percentage of federal poverty level*							
	≥400% (referent)	200%–399%		100%–199%		<100%		Overall
Characteristic	% (95% CI)†	% (95% CI)†	PR (95% CI)	% (95% CI)†	PR (95% CI)	% (95% CI)†	PR (95% CI)	% (95% CI)†
MBDD§	13.9 (12.1–16.0)	16.6 (14.1–19.3)	1.2 (0.9–1.5)	18.6 (15.5–22.1)	1.3 (1.1–1.7)¶	22.1 (18.8–25.9)	1.6 (1.3–2.0)¶	17.4 (16.2–18.7)
Health care								
Inadequate or no insurance**	27.4 (25.2–29.7)	33.0 (30.2–36.0)	1.2 (1.1–1.4)¶	24.1 (20.5–28.0)	0.9 (0.7–1.0)	20.7 (16.9–25.2)	0.8 (0.6–0.9)¶	26.9 (25.5–28.4)
Public insurance††	6.6 (4.7–9.2)	21.8 (19.0–24.8)	3.3 (2.2–5.0)¶	61.6 (57.6–65.4)	9.4 (6.7–13.2)¶	76.3 (71.6–80.5)	11.7 (8.2–16.6)¶	37.3 (35.5–39.0)
Lacks a medical home§§	36.7 (34.4–39.0)	48.2 (45.2–51.3)	1.3 (1.2–1.4)¶	57.7 (53.7–61.7)	1.6 (1.4–1.7)¶	62.1 (57.7–66.4)	1.7 (1.5–1.9)¶	49.9 (48.2–51.5)
Child saw health care provider in past year¶¶	93.8 (92.4–95.0)	90.1 (88.0–91.8)	1.0 (0.9–1.0)¶	84.7 (80.8–88.0)	0.9 (0.9–0.9)¶	80.4 (75.6–84.5)	0.9 (0.8–0.9)¶	88.0 (86.6–89.2)
Needed care not received***	0.8 (0.5–1.2)	1.9 (1.3–2.7)	2.4 (1.4–4.4)¶	3.6 (2.3–5.6)	4.6 (2.4–9.1)¶,†††	5.0 (3.0–8.2)	6.4 (3.2–12.6)¶,†††	2.6 (2.0–3.3)
Family								
Fair or poor parental mental health§§§	3.9 (2.8–5.5)	6.1 (4.3–8.6)	1.6 (1.0–2.6)	10.5 (7.9–13.7)	2.7 (1.7–4.2)¶	15.4 (12.2–19.1)	3.9 (2.6–5.8)¶	8.0 (7.0–9.1)
Fair or poor parental physical health¶¶¶	3.4 (2.4–4.7)	8.5 (6.5–11.1)	2.6 (1.7–3.9)¶	14.6 (11.5–18.4)	4.4 (2.9–6.7)¶	21.9 (18.1–26.2)	6.6 (4.5–9.6)¶	10.6 (9.4–11.8)
Difficult to get by on family's income****	6.1 (4.8–7.7)	19.9 (17.3–22.8)	3.3 (2.4–4.5)¶	34.6 (30.7–38.8)	5.7 (4.3–7.5)¶	45.0 (40.2–50.0)	7.4 (5.8–9.4)¶	24.2 (22.7–25.7)
Parent lacks emotional support††††	13.0 (11.1–15.0)	18.2 (15.5–21.2)	1.4 (1.1–1.8)¶	29.2 (24.9–34.0)	2.3 (1.8–2.8)¶	36.9 (32.0–42.1)	2.9 (2.3–3.5)¶	22.9 (21.2–24.7)
Child care problems (ages 0–5 yrs only)§§§§	3.4 (2.4–4.6)	8.0 (5.7–10.9)	2.4 (1.5–3.7)¶	7.8 (5.4–11.1)	2.3 (1.4–3.8)¶	10.7 (7.9–14.4)	3.2 (2.0–5.0)¶	7.1 (6.0–8.3)
Community								
Neighborhood without amenities¶¶¶¶	51.3 (49.0–53.6)	61.6 (58.7–64.3)	1.2 (1.1–1.3)¶	65.6 (61.0–69.9)	1.3 (1.2–1.4)¶	70.1 (65.1–74.7)	1.4 (1.3–1.5)¶	61.1 (59.5–62.7)
Neighborhood in poor condition*****	15.0 (13.3–16.9)	23.2 (20.5–26.0)	1.5 (1.3–1.8)¶	28.4 (24.5–32.7)	1.9 (1.6–2.3)¶	38.1 (33.4–42.9)	2.5 (2.1–3.0)¶	24.9 (23.4–26.4)
Lack of support in neighborhood†††††	15.5 (13.6–17.5)	25.7 (22.4–29.2)	1.7 (1.4–2.0)¶	35.0 (30.7–39.6)	2.3 (1.9–2.7)¶	41.8 (37.0–46.8)	2.7 (2.3–3.2)¶	28.0 (26.4–29.7)
Neighborhood perceived to lack safety§§§§§	1.5 (0.9–2.6)	4.6 (3.4–6.3)	3.0 (1.8–5.2)¶	6.7 (4.6–9.8)	4.4 (2.4–8.2)¶,†††	11.9 (8.6–16.4)	7.9 (4.4–14.2)¶	5.6 (4.7–6.7)
Urban/Rural status¶¶¶¶¶								
Urban	94.6 (93.8–95.3)	90.2 (89.1–91.2)	1.0 (0.9–1.0)¶	89.4 (87.8–90.9)	0.9 (0.9–1.0)¶	87.9 (85.5–90.0)	0.9 (0.9–1.0)¶	90.8 (90.1–91.5)
Large rural	3.4 (2.8–4.1)	5.6 (4.9–6.4)	1.6 (1.3–2.1)¶	6.1 (5.0–7.5)	1.8 (1.4–2.4)¶	6.6 (5.1–8.5)	1.9 (1.4–2.7)¶	5.3 (4.8–5.8)
Small rural	1.3 (1.0–1.7)	2.3 (1.8–2.8)	1.7 (1.2–2.5)¶	2.3 (1.8–3.0)	1.8 (1.2–2.6)¶	3.4 (2.5–4.6)	2.6 (1.7–3.9)¶	2.2 (2.0–2.6)
Isolated	0.6 (0.5–0.9)	2.0 (1.5–2.5)	3.0 (2.1–4.5)¶	2.1 (1.5–2.8)	3.2 (2.1–5.0)¶	2.1 (1.3–3.3)	3.2 (1.9–5.7)¶	1.6 (1.4–1.9)

Abbreviations: CI = confidence interval; PR = prevalence ratio.

* Federal poverty level is based on family income and family size and composition using federal poverty thresholds that are updated annually by the U.S. Census Bureau using the change in the average annual consumer price index for all urban consumers. Imputed income was used for 16.6% of children aged 2–8 years with MBDD status and sex reported, but without reported household income, using regression methods.

† Percentages are weighted. Column percentages might not sum to 100% because of rounding.

§ Based on a response of "yes" to whether "a doctor or other health care provider ever told you that this child has" one or more of the following disorders: "anxiety problems, depression, attention-deficit/hyperactivity disorder, behavioral or conduct problems, Tourette syndrome, autism spectrum disorder, learning disability, intellectual disability, developmental delay, or speech or other language disorder."

¶ Statistically significant difference from the referent group.

** Based on a negative value for any of four variables based on these questions: 1) "Is this child currently covered by any kind of health insurance or health coverage plan?" 2) "How often does this child's health insurance offer benefits or cover services that meet this child's needs?" 3) "Does the family pays out-of-pocket expenses," and if yes, "How often are these costs reasonable?" and 4) "How often does this child's health insurance allow him or her to see the health care providers he or she needs?"

†† Based on a response of "yes" to having "Medicaid, Medical Assistance, or any kind of government assistance plan for those with low incomes or a disability."

§§ Based on five component variables (personal doctor or nurse, usual source for sick and well care, family-centered care, problems getting needed referrals, satisfaction with communication, and effective care coordination when needed), derived from 16 survey items. To have a medical home, the child must have a personal doctor or nurse, usual source of care, and family-centered care; children needing referrals or care coordination must also have those criteria met.

¶¶ Based on a response of "yes" to the following question: "During the past 12 months, did this child see a doctor, nurse, or other health care professional for sick-child care, well-child check-ups, physical exams, hospitalizations or any other kind of medical care?"

*** Based on a response of "yes" to the following question: "During the past 12 months, was there any time when this child needed health care but it was not received? By health care, we mean medical care as well as other kinds of care like dental care, vision care, and mental health services."

††† Estimate has a relative standard error >30% and might be unreliable.

§§§ Based on whether either parent reported "fair" or "poor" (i.e., compared with "excellent," "very good," or "good") to the question: "In general, how is your mental or emotional health?"

¶¶¶ Based on whether either parent reported "fair" or "poor" (i.e., compared with "excellent," "very good," or "good") to the question "In general, how is your physical health?"

**** Based on an answer of "very often" or "somewhat often" (i.e., compared with "never" or "rarely") to the question "Since this child was born, how often has it been very hard to get by on your family's income (hard to cover the basics like food or housing)?"

†††† Based on a response of "yes" to the question "During the past 12 months, was there someone that you could turn to for day-to-day emotional support with parenting or raising children?"

§§§§ Based on a response of "yes" to the question: "During the past 12 months, did you or anyone in the family have to quit a job, not take a job, or greatly change your job because of problems with child care for (child)? Note: This question was asked for children aged 0–5 years only.

¶¶¶¶ Based on a response of "no" to any of the following four questions: "In your neighborhood, is/are there: 1) sidewalks or walking paths? 2) a park or playground? 3) a recreation center, community center, or boys' and girls' club? 4) a library or bookmobile?"

***** Based on a response of "yes" to any of the following three questions: "In your neighborhood, is/are there: 1) Litter or garbage on the street or sidewalk? 2) Poorly kept or rundown housing? 3) Vandalism such as broken windows or graffiti?"

††††† Based on a response of "definitely disagree" or "somewhat disagree" (i.e., compared with "definitely agree" or "somewhat agree") to any of the following three questions: "To what extent do you agree with these statements about your neighborhood or community? 1) People in this neighborhood help each other out, 2) We watch out for each other's children in this neighborhood, 3) When we encounter difficulties, we know where to go for help in our community."

§§§§§ Based on a response of "definitely disagree" or "somewhat disagree" (i.e., compared with "definitely agree" or "somewhat agree") to the following question: "To what extent do you agree with these statements about your neighborhood or community? 1) This child is safe in our neighborhood."

¶¶¶¶¶ Urban and rural designations were determined using a four-category classification based on 2010 rural-urban community area codes (RUCAs), a census tract–based classification system. Urban areas (RUCA codes 1.0, 1.1, 2.0, 2.1, 3.0, 4.1, 5.1, 7.1, 8.1, and 10.1) include metropolitan areas and surrounding towns from which commuters flow to an urban area; large rural areas (RUCA codes 4.0, 5.0, and 6.0) include large towns (micropolitan areas) with populations of 10,000–49,999 and their surrounding areas; small rural areas (RUCA codes 7.0, 7.2, 8.0, 8.2, and 9.0) include small towns with populations of 2,550–9,999 and up to 50% secondary flow to a large urban cluster of up to 50,000; isolated areas (RUCA codes 10.0, 10.2, and 10.3) with less than 2,500 population and up to 50% secondary flow to a large or small urban cluster (population up to 10,000). (https://www.census.gov/geo/reference/ua/urban-rural-2010.html).

TABLE 3. Service use among children* living below 200% of the federal poverty level, by parental report of any mental, behavioral, and developmental disorder (MBDD) — National Survey of Children's Health, United States, 2016

Characteristic	No public assistance† % (95% CI)§	Public assistance† % (95% CI)§	Total % (95% CI)§
Child saw health care provider in the past year¶	25.7 (23.1–28.4)	74.3 (71.6–76.9)	**82.6 (79.7–85.2)**
With MBDD**	15.1 (11.6–19.6)	84.9 (80.4–88.4)	**21.1 (18.5–24.0)**
Without MBDD**	28.5 (25.5–31.7)	71.5 (68.3–74.5)	**78.9 (76.0–81.5)**
Child did not see health care provider in the past year¶	31.1 (24.2–38.7)	69.0 (61.3–75.8)	**17.4 (14.8–20.3)**
With MBDD**	18.3†† (9.1–33.3)	81.7 (66.7–90.9)	**19.2 (13.0–27.5)**
Without MBDD**	34.0 (26.1–42.9)	66.0 (57.1–73.9)	**80.8 (72.5–87.0)**
Total	**26.6 (24.1–29.2)**	**73.4 (70.8–75.9)**	—

Abbreviation: CI = confidence interval.

* Restricted to nonmissing responses for child MBDD status, whether the child's family received public assistance, and whether the child saw a health care provider in the past year.

† Based on whether the parent reported the family received any of the four benefits (cash assistance; Women, Infants, and Children; Supplemental Nutrition Assistance Program; or free or reduced cost meals at school) at any time during the past 12 months.

§ Percentages are weighted. Column and row percentages might not sum to 100% because of rounding.

¶ Based on response to the following question: "During the past 12 months, did (child) see a doctor, nurse, or other health care professional for sick-child care, well-child check-ups, physical exams, hospitalizations, or any other kind of medical care?"

** Based on response to whether "a doctor or other health care provider ever told you that this child has" one or more of the following disorders: "anxiety problems, depression, attention-deficit/hyperactivity disorder, behavioral or conduct problems, Tourette syndrome, autism spectrum disorder, learning disability, intellectual disability, developmental delay, or speech or other language disorder."

†† Estimate is unstable; relative standard error = 33.3%.

Public assistance programs might provide opportunities to connect families living in poverty to services, in line with the American Academy of Pediatrics call for collaboration between public health professionals and pediatricians (*10*). Where treatment resources are available, education or early identification programs could be embedded within services families are already accessing. For example, CDC's Learn the Signs. Act Early program connects WIC staff members with resources for parents about early identification of developmental delays and helps staff with referrals to primary care.§§ Similar approaches to promoting parental awareness of MBDDs and the value of pediatric screening, if carefully designed to minimize stigmatization, could be implemented within other public assistance programs. Identification of MBDDs and associated risk factors (e.g., poor parental mental health or lack of support) and connection to services can be challenging for families, even among those with primary care. Therefore, expanded co-location of developmental and behavioral health services in public assistance programs, as well as other sites that would reach additional families (e.g., schools or early-learning settings, federally qualified health centers,¶¶ or federal partnerships***), might help to eliminate barriers to care for families living in poverty.†††, §§§

§§ https://www.cdc.gov/ncbddd/actearly/wic-providers.html.

¶¶ https://www.hrsa.gov/opa/eligibility-and-registration/health-centers/fqhc/index.html.

*** https://healthysafechildren.org/grantee/project-launch.

††† https://www.milbank.org/publications/behavioral-health-integration-in-pediatric-primary-care-considerations-and-opportunities-for-policymakers-planners-and-providers/.

§§§ https://www2.ed.gov/about/inits/ed/earlylearning/files/health-early-learning-statement.pdf.

Summary

What is already known about this topic?

Poverty, as well as health care, family, and community factors are associated with mental, behavioral, and developmental disorders (MBDDs) in children.

What is added by this report?

Parent-reported data from 2016 showed that a higher percentage of children in lower-income households had ever received a diagnosis of an MBDD and a lower percentage had seen a health care provider in the previous year, compared with children in higher-income households. Most children in lower-income households were in families receiving public assistance benefits.

What are the implications for public health practice?

Public assistance programs might offer collaboration opportunities for public health and pediatrics to provide information, implement co-located screening programs or services, or facilitate connection to care.

The findings in this report are subject to at least three limitations. First, data are cross-sectional, so it was not possible to ascertain temporal associations or causality. Second, the sampling weights used to calculate nationally representative estimates might not completely compensate for nonresponse bias. Finally, indicators rely on parental report and might be subject to recall or social desirability bias.

Early identification and treatment of MBDDs could positively impact a child's functioning and reduce the need for costly interventions over time (*8*). Public assistance programs hold potential for increasing developmental monitoring and connection to treatment for MBDDs for families living in

poverty by collaborating to distribute resources, implementing co-located screening services, or facilitating connections to appropriate treatment and care.

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Drug, Opioid-Involved, and Heroin-Involved Overdose Deaths Among American Indians and Alaska Natives — Washington, 1999–2015

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The opioid epidemic has resulted in a threefold increase in drug overdose deaths in the United States during 1999–2015 (*1*). Whereas American Indians/Alaska Natives (AI/AN) have experienced larger increases in drug overdose mortality than have other racial/ethnic groups in the United States (*2*), little is known about the regional impact of opioids in tribal and urban AI/AN communities. To address this data gap, death records from the Washington State Center for Health Statistics, corrected for misclassification of AI/AN race, were examined to identify trends and disparities in drug, opioid-involved, and heroin-involved overdose mortality rates for AI/AN and non-Hispanic whites (whites) in Washington. Although AI/AN and whites had similar overdose mortality rates during 1999–2001, subsequent overdose rates among AI/AN increased at a faster rate than did those among whites. During 2013–2015, mortality rates among AI/AN were 2.7 and 4.1 times higher than rates among whites for total drug and opioid-involved overdoses and heroin-involved overdoses, respectively. Washington death certificates that were not corrected for misclassification of AI/AN race underestimated drug overdose mortality rates among AI/AN by approximately 40%. National statistics on the opioid epidemic, which report that overdose mortality rates are significantly higher among whites than among AI/AN, are not reflective of regional prevalences, disparities, and trends. Comprehensive efforts to address the opioid epidemic in AI/AN communities rely on strong partnerships between tribal governments and local, state, and federal entities. Additional measures are needed for community-based surveillance, treatment, and prevention to effectively respond to the epidemic across diverse tribal and urban AI/AN communities.

Washington drug overdose deaths were identified using death certificate statistical files for 1999–2015 from the Washington State Center for Health Statistics. Death certificates were corrected for misclassification of AI/AN race by conducting probabilistic record linkages between Washington death certificates and the Northwest Tribal Registry (a database of personal identifiers for AI/AN patients seen in IHS, tribal, and urban Indian health clinics in Idaho, Oregon, and Washington) (*3*). Washington death certificates were matched to the Northwest Tribal Registry using social security number, date of birth, name (last, first, and middle), and sex. Two staff members conducted clerical review of all potential matched pairs to identify true matches. AI/AN decedents included those with any mention of American Indian or Alaska Native background (regardless of Hispanic ethnicity) in the multiple race fields on the death certificate and those who matched with the Northwest Tribal Registry database but had no indication of AI/AN background on the death certificate (i.e., misclassified AI/AN records). AI/AN were compared with the majority white population to identify relative disparities in Washington. Uncorrected national and state-level estimates for 2013–2015 were obtained from the CDC WONDER Online Database for comparison.*

For both corrected and uncorrected data, total drug overdose deaths were identified as deaths with one of the following *International Classification of Disease, Tenth Revision* (ICD-10) codes for drug poisoning in the underlying cause of death field on the death record: X40–X44 (accidental poisoning by and exposure to drugs), X60–X64 (intentional self-poisoning by and exposure to drugs), X85 (assault by drugs), or Y10–Y14 (poisoning by and exposure to drugs, undetermined intent). Opioid-involved overdose deaths include the subset of drug overdose deaths with at least one of the following ICD-10 codes in the multiple cause of death fields: T40.0 (opium), T40.1 (heroin), T40.2 (other natural or semisynthetic opioids), T40.3 (methadone), T40.4 (other synthetic opioids), or T40.6 (other and unspecified narcotics). Heroin-involved overdose deaths include the subset of drug overdose deaths with heroin (ICD-10 code T40.1) listed in any multiple cause of death field. Trends were calculated as 3-year rolling averages of age-adjusted mortality rates during the period 1999–2015. Rates were age-adjusted to the U.S. 2000 standard population using National Center for Health Statistics (NCHS) vintage 2015 bridged race estimates as population denominators. For rates among AI/AN, 95% confidence intervals (CIs) were based on the gamma distribution to account for small cell sizes (*4*), and CIs for rates among whites were calculated using the normal approximation method. Metropolitan and nonmetropolitan counties were designated using the NCHS 2013 Urban-Rural Classification Scheme for Counties (*5*).† Link Plus v.2.0 was used to conduct the probabilistic record linkages, and statistical software was used to analyze the corrected Washington death certificates. Uncorrected drug and opioid-involved overdose counts, rates,

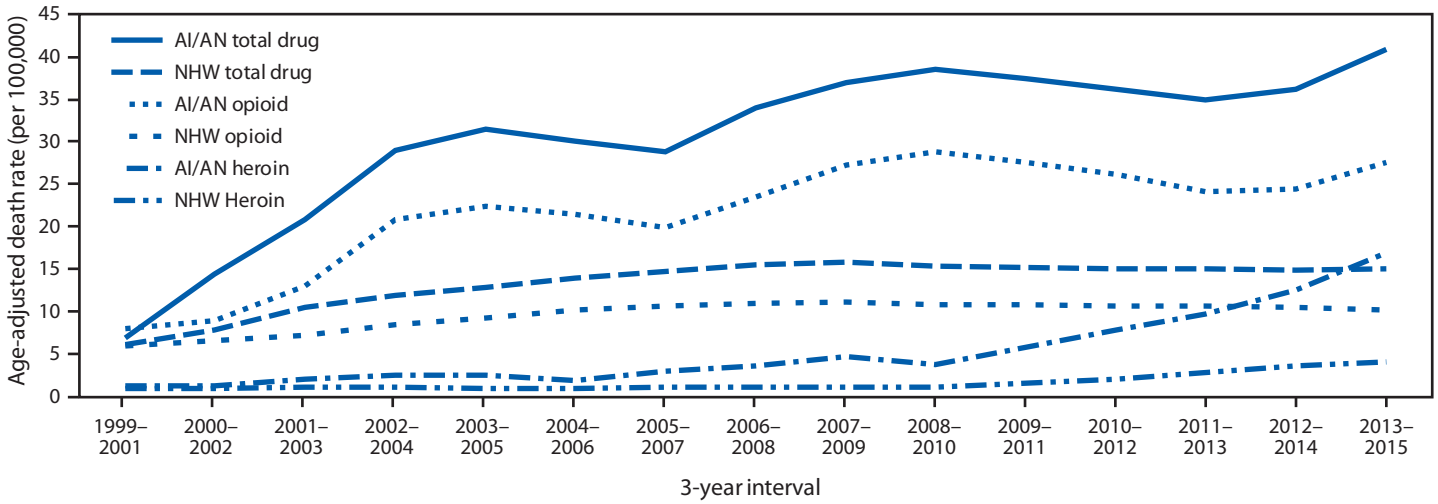
* Data are from NCHS Multiple Cause of Death Files, 1999–2015, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. https://wonder.cdc.gov/ucd-icd10.html.

† https://www.cdc.gov/nchs/data/series/sr_02/sr02_166.pdf.

and CIs for the United States and Washington were obtained using Multiple Cause of Death Data from the CDC WONDER online database (https://wonder.cdc.gov/mcd.html).

During 1999–2001, based on death certificates corrected for AI/AN misclassification, AI/AN and whites in Washington had similar age-adjusted total drug, opioid-involved, and heroin-involved overdose mortality rates (Figure). Overdose death rates increased significantly for both groups in subsequent years; however, the increase was much sharper among AI/AN than among whites. During 2013–2015, 184 drug overdose deaths occurred among AI/AN in Washington, including 126 (68.5%) that involved opioids. The rates were higher for total drug (2.7 times), opioid-involved (2.7), and heroin-involved overdose mortality (4.1) among AI/AN than among whites (Table 1). Among AI/AN in Washington, the total drug overdose rate among males was 1.7 times that among females (Table 2). AI/AN aged 25–54 years had higher rates of drug overdose mortality than did those in younger and older age groups. Age-specific drug overdose mortality rates among AI/AN were almost twice those among whites. The majority

FIGURE. Age-adjusted death rates*,† for total drug,§ opioid-involved, and heroin-involved overdose deaths among American Indians/Alaska Natives and non-Hispanic whites — Washington, 1999–2015



Source: Washington Center for Health Statistics Death Files 1999–2015, corrected for AI/AN misclassification through linkage with the Northwest Tribal Registry.
Abbreviations: AI/AN = American Indian/Alaska Native; NHW = non-Hispanic white.
* Per 100,000 persons.
† Three-year rolling averages.
§ Total drug overdose deaths include opioid-involved and nonopioid-involved deaths; opioid-involved deaths include heroin-involved deaths.

TABLE 1. Corrected* and uncorrected age-adjusted total drug†, opioid-involved, and heroin-involved overdose mortality rates (per 100,000 population) and rate ratios for American Indians/Alaska Natives and non-Hispanic whites — Washington and United States, 2013–2015

		Type of drug overdose rate (95% CI)		
Race	**Population**	**Total drug†**	**Opioid-involved**	**Heroin-involved**
American Indian/Alaska Native	WA (corrected)	40.9 (35.1–48.0)	27.5 (22.8–33.5)	16.7 (13.1–21.6)
	WA (uncorrected)	28.7 (23.7–33.7)	19.6 (15.7–24.2)	11.9 (8.9–15.5)
	US (uncorrected)	13.2 (12.5–13.8)	7.6 (7.1–8.0)	2.4 (2.1–2.6)
White, non-Hispanic	WA (corrected)	15.1 (14.5–15.7)	10.2 (9.7–10.7)	4.1 (3.7–4.4)
	WA (uncorrected)	15.7 (15.0–16.3)	10.6 (10.1–11.2)	4.3 (4.0–4.6)
	US (uncorrected)	19.2 (19.1–19.3)	12.1 (12.0–12.2)	4.4 (4.4–4.5)
AI/AN:NHW rate ratios				
WA AI/AN:NHW (corrected)	—	2.7 (2.3–3.1)	2.7 (2.3–3.2)	4.1 (3.2–5.2)
WA AI/AN:NHW (uncorrected)	—	1.8 (1.3–2.6)	1.8 (1.5–2.3)	2.8 (2.1–3.6)
U.S. AI/AN:NHW (uncorrected)	—	0.69 (0.65–0.72)	0.63 (0.59–0.67)	0.55 (0.49–0.61)
WA AI/AN (corrected:uncorrected)	—	1.4 (1.0–2.1)	1.4 (1.1–1.8)	1.4 (1.0–2.0)

Sources: Washington Center for Health Statistics Death Files 2013–2015 linked with the Northwest Tribal Registry (corrected data); CDC WONDER online database, Multiple Cause of Death data 2013–2015 (uncorrected data).
Abbreviations: AI/AN = American Indian/Alaska Native; CI = confidence interval; NHW = non-Hispanic white; WA = Washington.
* Data are corrected for misclassification of AI/AN race through probabilistic record linkage with the Northwest Tribal Registry.
† Total drug overdose deaths include opioid-involved and nonopioid-involved deaths; opioid-involved deaths include heroin-involved deaths.

TABLE 2. Number and age-adjusted rates (per 100,000 population) of total drug overdose deaths for American Indians/Alaska Natives and non-Hispanic whites, by sex, age, and rural/urban residence — Washington, 2013–2015

Characteristic	American Indian/Alaska Native			Non-Hispanic white		
	No.	Rate (95% CI)	Rate ratio (95% CI)	No.	Rate (95% CI)	Rate ratio (95% CI)
Sex						
Male	116	51.8 (42.7–64.7)	1.7 (1.3–2.3)	1,422	17.6 (16.6–18.5)	1.4 (1.3–1.5)
Female	68	30.1 (23.3–39.2)	Referent	1,040	12.5 (11.7–13.4)	Referent
Age group (yrs)						
<25	18	8.4 (5.0–13.2)	Referent	157	3.7 (3.1–4.3)	Referent
25–39	59	57.0 (43.4–73.5)	6.8 (4.0–11.5)	628	20.8 (19.2–22.5)	5.6 (4.8–6.8)
40–54	76	89.7 (70.7–112.3)	10.7 (6.4–17.9)	974	30.8 (28.9–32.8)	8.3 (7.1–10.0)
≥55	31	39.4 (26.8–55.9)	4.7 (2.6–8.4)	703	14.4 (13.4–15.5)	3.9 (3.3–4.7)
County type of residence						
Metropolitan (urban)	160	43.3 (36.7–51.5)	1.4 (0.9–2.2)	2,195	15.9 (14.0–17.8)	1.1 (0.9–1.2)
Nonmetropolitan (rural)	24	30.5 (19.3–48.1)	Referent	267	15.0 (14.3–15.7)	Referent

Source: Washington Center for Health Statistics Death Files 2013–2015, corrected for AI/AN misclassification through linkage with the Northwest Tribal Registry.
Abbreviation: CI = confidence interval.

of drug overdose deaths among AI/AN and whites occurred among Washington residents living in metropolitan (urban) counties. Among whites, similar rates of drug overdose deaths occurred among urban and rural residents; the overdose death rate among urban-dwelling AI/AN was 1.4 times that of AI/AN living in rural areas, although this difference was not statistically significant. The demographic distributions for opioid-involved and heroin-involved overdose deaths were similar to those observed for total drug overdose deaths.

During 2013–2015, based on CDC WONDER data uncorrected for AI/AN misclassification, in the United States, AI/AN had lower total drug, opioid-involved, and heroin-involved overdose mortality rates than those among whites (Table 1). Even before correction for AI/AN misclassification, AI/AN in Washington had higher drug, opioid-involved, and heroin-involved overdose mortality rates than did whites in Washington and AI/AN in the United States. Compared with Washington death certificates corrected for AI/AN misclassification, CDC WONDER data underestimated overdose mortality counts and rates among AI/AN in Washington by approximately 40% (Table 1).

Discussion

Since 1999, the rate of increase in drug, opioid-involved, and heroin-involved overdose deaths among AI/AN in Washington has outpaced that among whites. In recent years, AI/AN in Washington experienced total drug and opioid-involved overdose mortality rates that were 2.7 times higher than those of whites in the state. The prevalence and disparity experienced among AI/AN in Washington differ from overdose mortality patterns observed at the national level, which indicate that U.S. whites experience significantly higher mortality rates from drug, opioid-involved, and heroin-involved overdoses than do U.S. AI/AN (Table 1).

Summary

What is already known about this topic?

Nationally, American Indians and Alaska Natives (AI/AN) have experienced the largest increases in drug and opioid-involved overdose mortality rates compared with other racial/ethnic groups. Misclassification of AI/AN race is known to underestimate AI/AN mortality rates.

What is added by this report?

During 2013–2015, total drug and opioid-involved overdose mortality rates for AI/AN were 2.7 times higher than those of whites in Washington. Misclassification of AI/AN race in death certificates underestimated Washington AI/AN overdose mortality by approximately 40%.

What are the implications for public health practice?

Probabilistic linkages to correct misclassified race can improve accuracy of data on drug overdose mortality for AI/AN in Washington, which is important for state and federal resource allocation and program direction. Additional efforts are needed for community-based substance-use disorder surveillance, treatment, and prevention in AI/AN communities.

AI/AN communities experience high rates of physical, emotional, and historical trauma and significant socioeconomic disparities, which might contribute to higher rates of drug use in these communities (*5*). AI/AN also face barriers to receiving quality medical and behavioral health care, resulting in part from longstanding underfunding of the Indian Health Service (IHS), tribal, and urban Indian clinics, as well as stigma associated with accessing behavioral health care in some communities (*6*). The differences in corrected and uncorrected rate estimates demonstrate the importance of accurately recording race on death certificates. Without the probabilistic linkage correction, uncorrected Washington death certificates underestimated overdose mortality rates among AI/AN by 40%. Misclassification of AI/AN in public health data can

obscure the prevalence of disease and result in suppression of health statistics because of small numbers, which could affect the ability of state and federal programs to direct resources needed for a robust public health response to this epidemic.

The findings in this report are subject to at least six limitations. First, not all AI/AN in Washington seek care at IHS, tribal, or urban Indian health facilities, and thus, they would not have been included in the linkage. The Northwest Tribal Registry is known to underrepresent persons living in urban areas (*7*). Therefore, the actual number of drug overdose deaths and corresponding mortality rates among AI/AN might be higher than those reported in this analysis. Second, human error and bias might have been introduced during the probabilistic linkage process, particularly during clerical review of matched record pairs. Although double clerical review was employed as a strategy to decrease the introduction of bias, the possibility remains that human error could have resulted in the underascertainment or overascertainment of misclassified AI/AN records. Third, the NCHS bridged race estimates used as population denominators are known to inflate the Hispanic AI/AN population in the United States and therefore, result in the underestimation of mortality rates among AI/AN that include Hispanic AI/AN (*8*). Fourth, the circumstances under which toxicologic testing for drugs occurs and the testing methods themselves have changed over time (*1*), and these changes might account for some of the observed increases in drug and opioid-involved overdose deaths. Fifth, some heroin-involved deaths might have been misreported as morphine-involved deaths because of the similarity in metabolism of these two substances (*1*). Finally, this analysis of linkage-corrected death certificates was restricted to one state, which limits the generalizability of findings to AI/AN in other states.

Efforts that address the opioid epidemic are underway in tribal and urban AI/AN communities throughout the United States and rely on strong partnerships between tribal governments, regional Indian health boards, IHS and other federal agencies, tribal epidemiology centers, and local and state governments. IHS is addressing the epidemic in clinical settings through new prescribing policies, education for providers, and increased access to medication-assisted treatment and naloxone for first responders, in partnership with the Bureau of Indian Affairs (*9*). Additional efforts are needed for community-based surveillance, treatment, and prevention that address the variability in substance use disorder risk factors and outcomes across tribal and urban AI/AN communities. Programs that incorporate evidence-based strategies while addressing the diverse cultures, resources, and priorities of AI/AN communities might prove most effective in addressing current and future drug epidemics (*5*).

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Rabies in a Dog Imported from Egypt — Connecticut, 2017

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In 2007, the United States successfully eliminated canine rabies virus variant. Globally, however, dogs remain the principal source of human rabies infections. Since 2007, three cases of canine rabies virus variant were reported in dogs imported into the United States, one each from India (2007), Iraq (2008), and Egypt (2015) (*1*–*3*). On December 20, 2017, a dog imported into the United States from Egypt was identified with rabies, representing the second case from Egypt in 3 years. An Egyptian-based animal rescue organization delivered four dogs from Cairo, Egypt, to a flight parent (a person solicited through social media, often not affiliated with the rescue organization, and usually compensated with an airline ticket), who transported the dogs to the United States. The flight parent arrived at John F. Kennedy International Airport (JFK) in New York City and, via transporters (persons who shuttle dogs from one state to another), transferred the dogs to foster families; the dogs ultimately were adopted in three states. The Connecticut Department of Public Health Laboratory (CDPHL) confirmed the presence of a canine rabies virus variant in one of the dogs, a male aged 6 months that was adopted by a Connecticut family. An investigation revealed the possibility of falsified rabies vaccination documentation presented on entry at JFK, allowing the unvaccinated dog entry to the United States. This report highlights the continuing risk posed by the importation of dogs inadequately vaccinated against rabies from high-risk countries and the difficulties in verifying any imported dog's health status and rabies vaccination history.

Case Report and Findings

On December 20, 2017, a shipment of four rescue dogs arrived at JFK from Cairo, Egypt. Two transporters and one owner retrieved the dogs, with planned distribution to foster homes and permanent owners in Connecticut, Maryland, and Virginia. A fifth dog on the flight, traveling with a separate flight parent and not part of this shipment, shared the cargo hold and was temporarily housed in New Jersey and West Virginia before reaching its Washington destination. One of the four dogs, a male Chihuahua mix aged 6 months (dog A), was noticeably agitated and bit the flight parent before boarding the plane in Egypt. Dog A was imported with tooth fractures and exposed maxillary bone, reportedly from being struck by a car in autumn 2017.

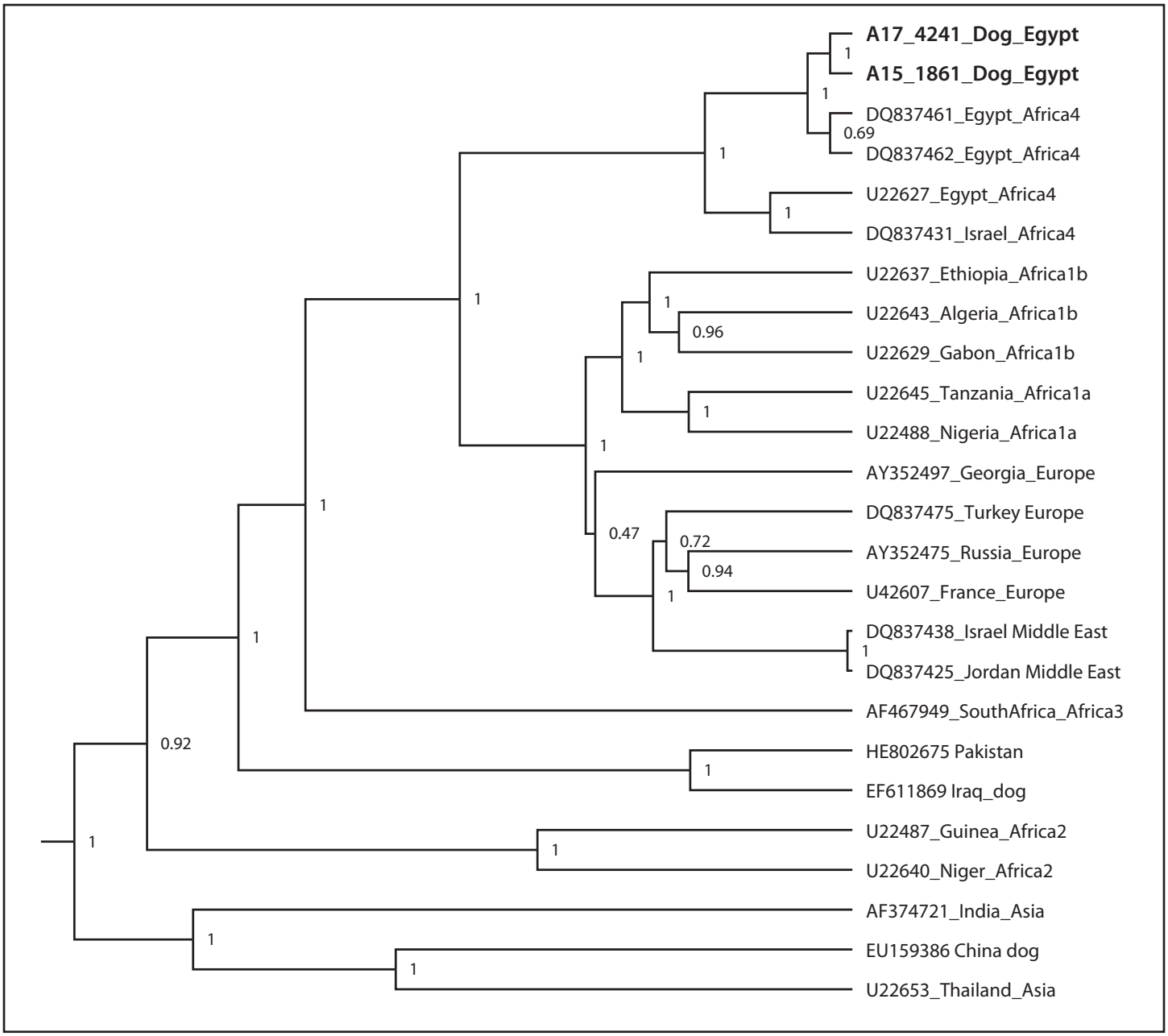
On assessment at a Connecticut veterinary clinic on December 21, dog A exhibited hyperesthesia (increased sensitivity to stimuli) and paresis. The dog bit a veterinary technician during a blood draw procedure and died shortly thereafter. The clinic submitted brain tissue for rabies testing to CDPHL. On December 26, CDPHL confirmed rabies virus infection by direct fluorescent antibody testing and informed CDC. On December 28, CDC confirmed the direct fluorescent antibody results and determined the variant was consistent with Africa 4 subspecies canine rabies virus circulating in Egypt (Figure).

Public Health Investigation

After CDPHL's notification of confirmed rabies, CDC's New York Quarantine Station initiated a contact investigation to identify animals or persons potentially exposed to dog A during its infectious period (10 days before symptom onset until death [December 9–21]). CDC contacted health departments in the chain of distribution of all five dogs in the cargo hold to initiate rabies exposure assessments; these health departments included the Maryland Department of Health, Virginia Department of Health, New York City Department of Health and Mental Hygiene, New York State Department of Health and Mental Hygiene, and Washington State Department of Health. The investigation also included U.S. Customs and Border Protection (CBP), the U.S. Department of Agriculture's Animal and Plant Health Inspection Service, the airline that transported the animals, and the domestic cargo offloading company at JFK.

State health department staff members interviewed dog A's caretakers, volunteers, and employees associated with the involved rescue groups and veterinary hospital staff members for potential exposure. Public health investigators for Maryland, New Jersey, New York, Washington, and West Virginia determined that the animal transporters and foster home volunteers had no direct contact with dog A; therefore, no postexposure prophylaxis (PEP) was recommended for those persons. Connecticut public health officials, in accordance with national guidelines (*4*), recommended PEP for the flight parent bitten in Cairo, the caretakers of dog A, and the veterinary technician who was bitten. CDC and CBP conducted a contact investigation to identify potentially exposed persons and animals at JFK. CBP interviewed the airline's U.S.-based cargo staff members and reviewed surveillance

FIGURE. Egyptian dog (bolded for both 2017 and 2015 isolates groups) with other available Egyptian strains as Africa 4 subspecies canine rabies virus (RABV Africa 4) subspecies*



* Phylogenetic tree is constructed from 1,350 nucleotides of nucleoprotein gene using BEAST program (http://beast.community). Posterior probabilities were labeled at each branch with probability values between 0 and 1. Branch length is related to the number of nucleotide substitutions. The more substitutions, the longer the branch. More evolved strains will be further from their ancestor.

video to identify transporters and CBP staff members who had potential exposure to dog A. CBP identified 13 cargo and baggage handlers and four CBP officers; New York City Department of Health and Mental Hygiene conducted risk assessments and determined that PEP was not recommended. All handlers reportedly wore gloves while handing the crates and had no direct contact with the dogs. CBP reviewed the importation paperwork and cleared the animals but had no physical contact with the dogs or the crates.

The domestic animal exposure investigations determined that all four dogs in the Egyptian shipment (dogs A, B, C, and D) were individually crated within the airplane cargo hold. A fifth dog (dog E, also in an individual crate), that was not part of the rescue organization shipment, shared the

same cargo hold space. The animals were never removed from the crates during shipment, so they could not have had direct contact with dog A. Therefore, dogs B, C, D, and E were not considered exposed to dog A during transport. Dog A had no contact with any dogs after exiting the airport and was placed in isolation at the veterinary clinic. All five dogs had certificates indicating rabies vaccination both at ≥3 months and ≥30 days before arrival at a U.S. port of entry (Table), as required by CDC dog importation regulations (*5*). However, because dog A's infection raised uncertainty about the validity of rabies vaccination for the five dogs, investigators determined that the four remaining dogs from the shipment should receive a rabies booster vaccination followed by confinement, as recommended by the Compendium of Animal Rabies Prevention and Control (*6*). In light of this uncertainty and the potential for unreported exposure before shipment, Maryland Department of Health elected to confine dogs B and C for 4 months; Virginia Department of Health and Washington State Department of Health elected to confine dogs D and E for 30 days (Table). Egyptian public health investigators instituted vaccination, confinement, and monitoring for four other dogs in the Egyptian rescuer's possession and indicated that persons exposed to dog A were given PEP. Clarification by Egyptian authorities of why an appropriately vaccinated dog (according to the documentation provided) developed rabies is pending.

Summary

What is already known about this topic?

Public health challenges associated with the global movement of animals include importation of canine rabies virus variant into the United States from countries where the virus is enzootic.

What is added by this report?

A rabid dog imported into the United States from Egypt, with documentation of rabies vaccination but no medical history, resulted in a six-state investigation and administration of rabies postexposure prophylaxis to multiple persons.

What are the implications for public health practice?

Use of flight parents who have no medical history for the dog they are transporting poses a potential human and animal health threat. To prevent reintroduction of the canine rabies virus variant, the United States needs to continue vigilance at ports of entry, domestic surveillance infrastructure, and high dog vaccination coverage.

Discussion

Elimination of the canine rabies virus variant from the United States required approximately 5 decades and hundreds of millions of dollars. Imported cases present an ongoing opportunity for reestablishment of the variant and require lengthy and costly investigations to prevent additional cases in both humans and animals.

This report describes the sixth importation of a rabid dog into the United States in the past 15 years and the third from the Middle East; all six were rescued dogs (*1*–*3*,*7*,*8*). Rabies in dogs might be underreported in the United States because rabies can have a variable clinical course that might not prompt animal owners to seek postmortem rabies testing (*9*). Previous reports and publications have discussed the public health challenges associated with the global movement of animals in commerce and the federal, state, and local authorities involved with dog importation (*1*–*3*,*7*,*8*). The United States has one of the most robust rabies surveillance and response networks in the world, with approximately 120 diagnostic laboratories testing approximately 100,000 animals every year. This network of clinical veterinarians, public health practitioners, and rabies diagnostic laboratories improves the chances of early detection of cases and termination of transmission chains. A high level of background vaccination in most U.S. dog populations also serves as a barrier to this disease. This surveillance network rapidly identified these six documented events, and none has resulted in transmission in U.S. dogs.

CDC and local and state agencies have received reports of invalid or questionable health and rabies vaccination certificates for imported dogs (*9*). The inadequacy of dog A's rabies vaccination could have been caused by vaccination failure, improperly stored vaccine, or fraudulent documentation.

TABLE. Date or year of birth and reported rabies vaccination or revaccination dates for five dogs shipped from Egypt to the United States on December 20, 2017

	Information provided on Egyptian rabies vaccination certificate		Vaccination or revaccination after arrival in the United States		
Dog	Date or year of birth	Date of rabies vaccination	Final U.S. destination	Date of U.S. rabies vaccination or revaccination	End (duration) of confinement*
A	Jun 10, 2017	Sep 14, 2017	Connecticut	N/A	N/A
B	2013	Nov 22, 2017	Maryland	Jan 5, 2018	May 5, 2018 (4 months)
C	Jun 9, 2017	Nov 2, 2017	Maryland	Dec 26, 2017	Apr 26, 2018 (4 months)
D	2012	Oct 27, 2017	Virginia	Dec 27, 2017	Jan 26, 2018 (30 days)
E	Apr 6, 2016	Nov 4, 2017	Washington	Dec 28, 2017	Jan 27, 2018 (30 days)

* Includes CDC-required confinement period of 30 days after vaccination and individual state requirements for rabies postexposure quarantine.

Vaccination failure is rare when rabies vaccine is properly stored and administered; no other vaccination issues were reported from the manufacturer with the lot used in dog A. In addition, dog A was apparently not part of the original shipment agreed to by the flight parent, who had no medical history for dog A. Accepting rescue dogs or other animals without knowing their histories or having personal knowledge about the accuracy of veterinary documents can lead to the unnecessary exposure of persons and animals to a lethal zoonotic disease.

To prevent the reintroduction of the canine rabies virus variant, the United States needs to continue vigilance at ports of entry, domestic surveillance infrastructure, and dog vaccination coverage. At U.S. ports of entry, there is a visual inspection for death or signs of illness that prompts a required necropsy or veterinary examination under CDC's regulations. However, the signs typical of rabies (e.g., agitation, barking, aggressiveness, and altered mental status) also are common in stressed dogs during long-distance travel, and, unless the animal is near death, ill dogs could be overlooked. Increased education of rescue organizations both domestically and internationally and enhanced focus on dogs from countries where canine rabies virus variant is circulating could help increase awareness of the significance of rabies control in dog importations and reduce the potential for importation of cases.

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Trends and Gaps in National Blood Transfusion Services — 14 Sub-Saharan African Countries, 2014–2016

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Ensuring availability of safe blood products through recruitment of voluntary, nonremunerated, blood donors (VNRDs) and prevention of transfusion-transmissible infections (TTIs), including human immunodeficiency virus (HIV), hepatitis B virus (HBV), hepatitis C virus (HCV), and syphilis, is important for public health (*1*,*2*). During 2004–2016, the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) provided approximately $468 million in financial support and technical assistance* to 14 sub-Saharan African countries† with high HIV prevalence to strengthen national blood transfusion services (NBTSs)§ and improve blood safety and availability. CDC analyzed these countries' 2014–2016 blood safety surveillance data to update previous reports (*1*,*2*) and summarize achievements and programmatic gaps as some NBTSs begin to transition funding and technical support from PEPFAR to local ministries of health (MOHs) (*2*,*3*). Despite a 60% increase in blood supply since 2004 and steady declines in HIV prevalence (to <1% among blood donors in seven of the 14 countries), HIV prevalence among blood donors still remains higher than that recommended by the World Health Organization (WHO) (*4*). PEPFAR support has contributed to significant reductions in HIV prevalence among blood donors in the majority of PEPFAR-supported countries, and linking donors who screen HIV-positive to confirmatory testing and indicated treatment, as well as further reducing TTIs, remains a public health priority (*5*).

In 2016, WHO Global Status Report on Blood Safety and Availability¶ reported that 5.6 million units of blood (4% of the global supply) were collected in Africa; 38 African countries collected <10 whole-blood donations per 1,000 population, the WHO-recommended target (*1*). To meet demand, countries often rely on family or replacement donors who donate blood for a family member or friend; however, such donations carry a higher risk for TTIs (*6*). Since 2004, PEPFAR support has helped establish national blood policies, improved blood donor screening, increased recruitment and reliance on VNRDs for national supplies, and strengthened laboratory infrastructure, accreditation, information systems, and continuous quality improvement programs (*4*).

During 2014–2016, NBTSs in the 14 PEPFAR-supported sub-Saharan African countries used a standardized data collection tool to report the total number of blood units collected; the percentage of donated units that screened positive for HIV and other TTIs; the percentage of screen-positive donors who were notified of their result; and the status of financial support transition from PEPFAR to MOHs. MOH funding to support blood safety activities at the local NBTS was self-reported to the PEPFAR and CDC-supported WHO Global Database on Blood Safety. The numbers of whole blood units collected per 1,000 population per year were calculated using national census estimates or United Nations population projections.**

During 2004–2016, overall total annual blood collections in PEPFAR-supported countries increased 60%, from 1,469,561 units in 2004 to 2,352,905 units in 2016, although collection rates remain below WHO recommendations (*1*) in all countries except South Africa and Swaziland (Table 1). From 2014 to 2016, the number of units collected per 1,000 population decreased in five countries (Kenya, Lesotho, Nigeria, Swaziland, and Zambia); however, during this period, eight countries reported collecting 100% of their national blood supply from VNRDs. The largest increase in VNRD donations (40%) occurred in Ethiopia (from 70% in 2014 to 98% in 2016); however, declines in VNRD donations in Lesotho (18%, from 96% to 79%) and Tanzania (11%, from 89% to 79%) also occurred.

In all 14 countries, most blood donors were men (65% in 2014 and 86% in 2016); however, from 2014 to 2016, the number of female blood donors aged 20–24 years increased approximately thirtyfold, from 4,424 in 2014 to 146,571 in 2016. The largest increase in male donors (201%) occurred among persons aged 30–34 years, from 45,725 in 2014 to 137,596 in 2016.

* Blood Safety programs are funded through the Human Movement Blood Laboratories budget code.

† Côte d'Ivoire, Ethiopia, Ghana, Kenya, Lesotho, Mozambique, Nigeria, Rwanda, South Africa, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe. A full list of countries receiving PEPFAR support is available at https://www.pepfar.gov.

§ National blood transfusion services refers to those government or nongovernmental organizations with a legal mandate to collect, test, process, and distribute blood and blood components within a given country, or the legal authority to oversee or regulate the collection, testing, processing, and distribution of blood and blood components by other entities within that country.

¶ https://www.who.int/bloodsafety/global_database/en/.

** Africa Society for Blood Transfusion accreditation lasts for 2 years; Namibia was accredited in 2012.

TABLE 1. Number of blood units collected by U.S. President's Emergency Plan for AIDS Relief (PEPFAR)–supported blood transfusion services, number of blood units from voluntary nonremunerated donors (VNRDs), and blood units collected per 1,000 population, by country — 14 PEPFAR-supported countries, 2004 and 2014–2016

	2004			2014			2015			2016		
Country	No. collected	% VNRD	No. per 1,000 population	No. collected	% VNRD	No. per 1,000 population	No. collected	% VNRD	No. per 1,000 population	No. collected	% VNRD	No. per 1,000 population
Côte d'Ivoire	77,972	100	3.4	143,691	100	6.3	155,534	100	6.8	168,025	100	7.4
Ethiopia	43,247	59	0.4	87,685	70	0.8	140,061	97	1.4	173,923	98	1.7
Ghana	165,426	41	6.0	150,322	30	5.4	155,250	34	5.6	160,624	36	5.8
Kenya	18,440	100	0.4	183,475	100	3.9	155,081	100	3.3	167,100	100	3.6
Lesotho	3,000	95	1.4	8,373	96	3.9	7,879	97	3.7	5,008	79	2.3
Mozambique*	67,105	58	3.4	121,091	39	4.3	126,068	42	4.5	131,231	45	4.6
Nigeria†	1,266	100	<0.1	48,908	91	0.2	66,614	82	0.3	51,329	84	0.2
Rwanda	28,777	100	2.4	42,789	100	3.6	53,436	100	4.6	61,768	100	5.3
South Africa	709,324	100	13.0	803,818	100	14.7	828,689	100	15.2	810,895	100	14.8
Swaziland	7,060	100	5.4	14,727	100	11.3	13,752	100	10.5	13,687	100	10.5
Tanzania§	129,404	66	2.4	128,915	89	2.4	67,980	49	1.2	196,735	79	3.6
Uganda	112,250	100	2.8	212,939	100	5.4	230,995	100	5.9	243,335	100	6.2
Zambia	38,477	71	2.3	109,269	100	6.7	100,110	100	6.1	104,355	100	6.4
Zimbabwe	67,813	100	4.3	58,603	100	3.7	59,767	100	3.8	64,890	100	4.1
Total	**1,469,561**	**—**	**2.2**	**2,114,605**	**—**	**3.4**	**2,161,216**	**—**	**3.6**	**2,352,905**	**—**	**3.8**

Source: 2004, 2014–2016 population data from the Joint United Nations Programme on HIV and AIDS. http://aidsinfo.unaids.org/.
Abbreviations: AIDS = acquired immunodeficiency syndrome; HIV = human immunodeficiency virus.
* 2004 data for Mozambique from https://www.cdc.gov/mmwr/volumes/65/wr/mm6505a4.htm.
† Nigeria and Tanzania did not have data for 2004; therefore, data for 2003 and 2005 were used.

During 2014–2016, the prevalence of whole blood units screening positive for HIV declined in 10 countries (range = 0.1–1.2 percentage-point declines) but increased in Nigeria (by 0.1 percentage point), Rwanda (0.1) and Swaziland (1.2) (Table 2). The HIV screening prevalence among donated units in seven countries remains higher than the WHO target of <1% (*4*). During 2014–2016, in nine countries with information on informing donors of HIV screening results, only 18.0% (2,971 of 16,539 [2014]) to 27.6% (3,660 of 13,269 [2016]) of donors who screened HIV-positive were notified of their results (Figure). During this period, the total number of deferrals remained steady (>250,000 units); however, deferrals attributable to high-risk behavior declined from 2014 to 2015.

From 2014 to 2016, the prevalence of HBV, HCV, and syphilis reactivity in donated blood units decreased in six countries; decreases ranged from 0.1 percentage point (Tanzania) to 1.3 percentage points (Mozambique) (Table 2). The prevalence of TTIs in donated units increased in seven countries (Côte d'Ivoire, Ghana, Lesotho, Nigeria, Rwanda, South Africa, Swaziland, and Uganda) (Table 2). In 2016, the percentage of donated blood units that screened positive for all TTIs ranged from 0.7 (South Africa) to 14.6 (Nigeria).

As support for local blood safety programs transitioned to MOHs from PEPFAR, MOHs in Ethiopia, Swaziland, and Tanzania completely absorbed the cost of collecting and testing blood in 2016. Nine of 12 countries with available data report ≥50% of MOH support to the NBTS (Supplementary Table, https://stacks.cdc.gov/view/cdc/61188).

Discussion

Sub-Saharan African countries have improved access to safe and adequate blood supplies, but continued commitment and funding are required to maintain gains and achieve WHO targets. Although the number of blood units collected has increased since 2004, whole blood collections remain insufficient to meet national demand: 12 of 14 evaluated countries do not meet the WHO-recommended target (*1*). This shortfall especially affects women with pregnancy-related complications, trauma victims, and children with severe life-threatening malaria-related anemia (*7*).

Although most of the 14 PEPFAR-supported countries reported decreases in the percentage of collected blood units that screened positive for HIV since 2004, percentages remain significantly higher than the 0.003% reported by high-income countries (*1*). Seven countries have HIV screen-positive rates that exceed the WHO recommended target of <1.0%. Although HIV prevalence rates among blood donors have decreased, prevalences of other TTIs such as HBV, HCV, and syphilis increased in seven countries. To reduce the risk for TTIs in sub-Saharan Africa when PEPFAR support ends, MOHs can participate in cross-sector collaborations to implement blood bank quality and safety accreditation standards through the African Society for Blood Transfusion (AfSBT)†† or other international accrediting bodies and implement PEPFAR-supported blood safety information systems. Recent data indicate that 50% of PEPFAR-supported countries still do

†† https://afsbt.org/.

TABLE 2. Population prevalence of human immunodeficiency virus (HIV) infection among persons aged 15–49 years in the general population, percentage of collected blood units reactive for HIV, and percentage of collected blood units reactive for three transfusion-transmissible infections (TTIs) (hepatitis B virus [HBV], hepatitis C virus [HCV], and syphilis), by country — 14 U.S. President's Emergency Plan for AIDS Relief–supported countries, 2014–2016*

				Prevalence (%) of TTIs in collected blood units								
							Other TTIs			All TTIs		
	HIV population prevalence (%)			HIV			HBV, HCV, and syphilis			HIV, HBV, HCV, and syphilis		
Country	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Côte d'Ivoire	**3.0**	**2.8**	**2.7**	**0.3**	**0.04**	**0.2**	**8.6**	**9.0**	**8.9**	**9.0**	**9.0**	**9.1**
Ethiopia	1.1	1.1	0.9	2.1	1.2	1.1	4.4	4.6	4.2	5.2	5.1	4.5
Ghana	1.7	1.6	1.6	0.7	0.5	0.3	9.7	7.1	11.6	11.8	8.3	12.7
Kenya	5.7	5.6	5.4	0.6	0.8	0.6	2.8	4.3	2.5	3.5	5.2	3.2
Lesotho	24.7	24.9	25	2.6	2.4	2.5	3.6	3.8	5.0	6.2	6.2	7.6
Mozambique	13.0	12.7	12.3	5.2	4.8	4.0	8.2	8.8	6.9	13.4	13.6	11.0
Nigeria	3.1	3.0	2.9	1.4	1.4	1.5	11.3	11.7	13.1	12.9	13.2	14.6
Rwanda	3.2	3.2	3.1	0.1	0.1	0.2	2.6	2.7	3.4	2.8	2.9	3.6
South Africa	18.8	18.9	18.9	0.2	0.2	0.1	0.3	0.3	0.5	0.5	0.5	0.7
Swaziland	27.6	27.5	27.2	0.7	1.5	1.9	1.6	3.0	5.6	2.4	4.6	7.6
Tanzania	6.9	6.7	6.5	1.4	1.5	1.3	7.7	14.3	7.6	9.2	10.8	8.9
Uganda	5.0	4.8	4.7	0.9	0.6	0.6	3.4	4.2	3.8	4.3	4.8	4.4
Zambia	12.7	12.6	12.4	3.4	2.9	2.9	8.1	7.1	7.0	11.6	10.1	10.0
Zimbabwe	14.3	13.9	13.5	0.5	0.4	0.4	0.6	0.4	0.4	1.1	0.8	0.8

Source: 2014–2016 from United Nations Development Program population estimates. http://hdr.undp.org/en/data#.
Abbreviation: AIDS = acquired immunodeficiency syndrome.
* Self-reported data for 2014, 2015, and 2016.

not have a computerized information system for blood donor tracking and TTI testing. Since 2016, blood safety information systems have been implemented in three countries, with another two planned by 2019. To date, only four NBTSs in sub-Saharan Africa (Namibia [accredited in 2012], South Africa, Rwanda, and Tanzania) have achieved accreditation by an external body. Seven countries are currently in various stages of the accreditation process through AfSBT. Global CDC blood safety targets are that 50% of NBTS sites reach at least the first of three accreditation steps under AfSBT during the next 2–3 years.

As countries move toward the United Nations 95–95–95 targets (95% of HIV infection diagnosed, 95% of infected persons receiving antiretroviral therapy [ART], and 95% of those on ART achieving viral suppression) for achieving epidemic control, increasing outreach to priority populations for testing and preventive services become increasingly important (*8*). Currently, no systems exist within these NBTSs to link persons determined to be ineligible for donation through behavioral risk screening to HIV testing and preventive services.

During 2014–2016, four NBTSs transitioned from PEPFAR to full MOH funding. An additional five countries received ≥50% of their funding from MOHs; two countries reported a decrease in MOH funding. As PEPFAR transitions occur, countries should consider prioritization of funding to their NBTS to sustain the gains achieved (*9*).

The findings of this report are subject to at least four limitations. First, blood unit collections described in this report only represent units collected by the NBTS, and do not account for units collected in the private sector or by nonnational blood transfusion services. Second, variations in testing capacity and assays used for laboratory screening (most NBTSs lack HBV and HCV confirmatory testing) might result in over- or underestimation of TTI prevalence rates among blood donors. Third, lack of information systems to link donors who screen HIV-positive to treatment services might result in inaccurate

Summary

What is already known on this topic?

Since 2004, the U.S. President's Emergency Plan for AIDS Relief has improved blood availability and safety in 14 sub-Saharan African countries; however, the risk for human immunodeficiency virus (HIV) transmission via transfusion remains unacceptably high.

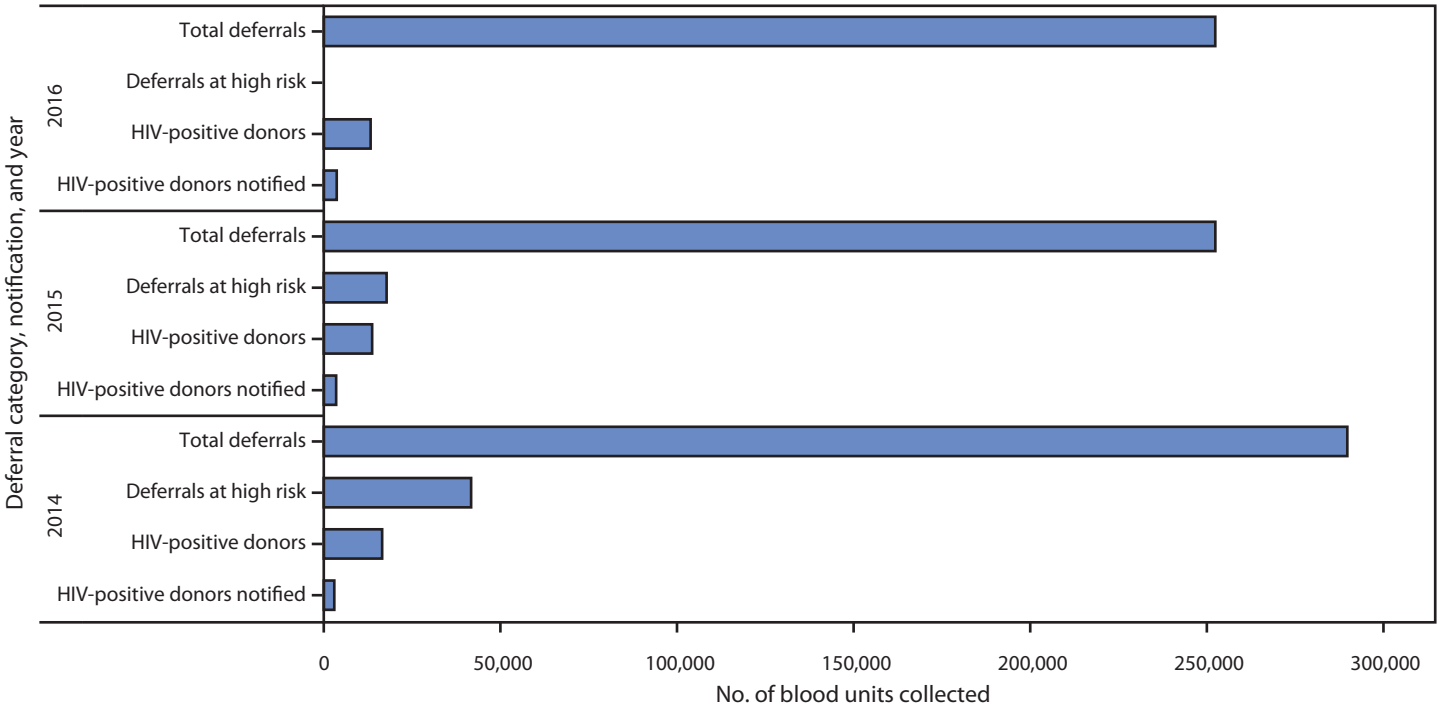
What is added by this report?

During 2014–2016, blood collections increased and donor HIV prevalence decreased in seven of the 14 countries, but systems to link HIV-positive and donors at high risk to testing and treatment are inadequate.

What are the implications for public health practice?

Sustained investments by ministries of health in continuous quality improvement, national blood transfusion services accreditation, linkage of HIV-positive and donors at risk to testing, care, and treatment, and blood safety information systems remain important components to ensure the viability of blood safety programs.

FIGURE. Total number* of blood units collected for all deferrals,† deferrals at high risk,§,¶ human immunodeficiency virus (HIV)–positive donors, and HIV-positive donors notified of their HIV status, by year — nine U.S. President's Emergency Plan for AIDS Relief–supported countries, 2014–2016††**



Abbreviation: AIDS = acquired immunodeficiency syndrome.

* Total number of blood units collected: 1,583,617 in 2014; 1,590,104 in 2015; and 1,771,798 in 2016.

† Deferrals are defined as donors who do not meet donor selection criteria after administration of a risk assessment questionnaire.

§ Deferrals at high risk, classified based on seven categories of behavior; data for number of deferrals at high risk from Global Database for Blood Safety.

¶ Percentage of deferrals at high risk from total blood units collected: 2014, 14%; 2015, 7%; and 2016, data not available.

** Ethiopia, Kenya, Nigeria, Rwanda, South Africa, Swaziland, Tanzania, Uganda, and Zambia.

†† Number of deferrals at high risk for 2016 was not available.

estimations of the number of donors who are notified about their status. Finally, self-reported data from countries might result in inaccurate estimations.

A decade of PEPFAR support to NBTSs in 14 countries has led to increases in blood collections, fewer donors screening HIV-positive, and transition of support from PEPFAR to MOHs. However, gaps in linking deferred donors at high risk to HIV testing and prevention services, and in notifying HIV-positive donors of their status and linking them to confirmatory testing, care, and treatment underscore the need for enhanced focus on epidemic control, as well as innovative strategies to address donors who test positive for other TTIs. Ending reliance on unsafe blood donors requires continued investment in laboratory quality improvement, including increased engagement in external proficiency testing and increased use of highly sensitive assays at the NBTS and non-NBTS testing sites. Continued improvement of blood safety programs in sub-Saharan Africa will require sustained investments in continuous quality improvement, NBTS accreditation under AfSBT, linkage of deferred donors who report high risk behaviors and those who screen HIV-positive to HIV testing services and treatment, and stronger blood safety information systems. Strengthening health systems and developing local policy and sustainable financial resources are all important components to consider to ensure the future viability of blood safety programs.

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Notes from the Field

Infections After Receipt of Bacterially Contaminated Umbilical Cord Blood–Derived Stem Cell Products for Other Than Hematopoietic or Immunologic Reconstitution — United States, 2018

Kiran M. Perkins, MD[1]; Samantha Spoto, MSPH[2]; Danielle A. Rankin, MPH[2]; Nychie Q. Dotson, MPH[2]; Mary Malarkey[3]; Melissa Mendoza, JD[3]; Lorrie McNeill[3]; Paige Gable[1]; Krista M. Powell, MD[1]

The only Food and Drug Administration (FDA)–approved stem cell products are derived from umbilical cord blood, and their only approved use is hematopoietic and immunologic reconstitution (*1*). On September 17, 2018, the Texas Department of State Health Services received notification of *Enterobacter cloacae* and *Citrobacter freundii* bloodstream infections in three patients who had received injections or infusions of non-FDA–approved umbilical cord blood-derived stem cell products processed by Genetech, Inc., and distributed by Liveyon, LLC, for other than hematopoietic or immunologic reconstitution at an outpatient clinic on September 12. Patient isolates of *E. cloacae* had identical pulsed-field gel electrophoresis patterns, suggesting a common source. On September 22, the Florida Department of Health received notification of *Escherichia coli*, *Enterococcus faecalis,* and *Proteus mirabilis* joint infections in four patients who had received injections of these same products at an orthopedic clinic during February 15–August 30, 2018, also for other than hematopoietic or immunologic reconstitution. Cultures of unopened products from the clinic by a Florida hospital identified contamination with *E. coli* and *E. faecalis*. In response, on September 28, Liveyon issued a voluntary recall and immediately discontinued purchase of the Genetech-processed stem cell products (*2*,*3*). On October 4, CDC issued a nationwide call for reports of culture-confirmed infections in patients who had received the Liveyon product.

As of December 14, CDC has received reports of infections in 12 patients from three states, including the initial Florida and Texas cases: Texas (seven), Florida (four), and Arizona (one). Infection types included bloodstream infections, joint infections, and epidural abscesses, among others. All 12 patients received infusions or injections of Liveyon's product before the recall. Among 11 patients for whom conditions prompting product administration were known, all had nonhematopoietic conditions such as pain or orthopedic conditions. All patients were hospitalized; none died (Table).

CDC tested unopened vials obtained from the Texas and Florida clinics where the initial patients had received the product. The six vials from Texas had the same cord-blood donor and processing date as those that had been administered to the patients with infections. *E. cloacae* was isolated from all six vials; *C. freundii* also was isolated from five. The four vials from Florida were from different donors and processing dates than were the vials from Texas. *E. coli* was isolated from one of two vials from the same cord-blood donor and processing date; *E.coli* and *E. faecalis* were isolated from one of two vials from two unique donors with unique processing dates.

Ongoing investigations include active case finding, additional laboratory testing to compare clinical and product isolates, onsite assessments of health care facility infection control and injection safety practices, and investigation of manufacturing practices (including distribution); initial investigation suggests that bacterial contamination occurred before distribution. Umbilical cord blood cannot be decontaminated after collection because there are currently no validated processes for sterilization, so manufacture of derived products must be highly controlled to prevent distribution of contaminated products (*4*). The Genetech-processed, Liveyon-distributed product is not FDA-approved or lawfully marketed. Though Genetech and Liveyon are registered with FDA, such registration is not a form of FDA approval. FDA registration alone does not demonstrate compliance of firms or their products with the law.

Regardless of when contamination occurred, this investigation highlights the serious potential risks to patients of stem cell therapies administered for unapproved and unproven uses other than hematopoietic or immunologic reconstitution (*5*). Although the safety and efficacy of stem cells for other than hematopoietic or immunologic reconstitution have not been well established (*1*,*4*), many companies, clinics, and clinicians continue to market products from various sources as treatment for orthopedic, neurologic, and rheumatologic conditions without FDA approval. Such clinics and providers operate in outpatient settings, which often have less robust oversight of infection control measures, including injection safety and medication preparation (*6*), potentially amplifying risk to patients. Therefore, FDA has recommended that patients avoid receiving such products outside controlled clinical studies being conducted under an investigational new drug application; these settings help ensure that appropriate manufacturing and safety reporting procedures are followed (*1*). Health care professionals and consumers should report any adverse events related to treatment with the Genetech/Liveyon products or any unapproved stem cell therapies to FDA's MedWatch Safety Information and Adverse Event Reporting Program (https://www.fda.gov/Safety/MedWatch/).

TABLE. Clinical characteristics of patients with culture-confirmed infections after receiving umbilical cord blood-derived stem cell products for other than hematopoietic or immunologic reconstitution — United States, 2018

Patient	Route/Site of administration	Date administered	Setting	Condition prompting product administration*	Specimen collection date, first positive culture	Organism isolated	Infection site	Days of initial hospitalization to treat infection
1	Intra-articular injection, knee and shoulder	Feb 15, 2018	Orthopedic clinic	Degenerative joint disease	Feb 21, 2018	*Escherichia coli, Proteus mirabilis*	Knee	15
2	Intra-articular injection, lumbar spine	Jun 13, 2018	Pain clinic	Pain	Jun 14, 2018	*Escherichia coli*	Bloodstream	4
3	Intra-articular injection, lumbar spine	Jul 27, 2018	Ambulatory surgery center	Pain	Aug 1, 2018	*Escherichia coli, Enterococcus faecalis*	Bloodstream, lumbosacral epidural abscess, discitis, and vertebral osteomyelitis†	58
4	Intra-articular injection, knee and shoulder	Aug 3, 2018	Orthopedic clinic	Unknown	Aug 10, 2018	*Escherichia coli, Enterococcus faecalis*	Knee	30
5	Intra-articular injection, shoulders	Aug 14, 2018	Chiropractic clinic	Osteoarthritis	Aug 29, 2018	*Escherichia coli*	Bloodstream, shoulders	8
6	Intra-articular injection, shoulder	Aug 22, 2018	Orthopedic clinic	Rotator cuff tear with intrasynovial cyst	Sep 9, 2018	*Escherichia coli*	Shoulder	6
7	Intra-articular injection, lumbar spine	Aug 28, 2018	Spine treatment clinic	Lumbar back pain	Sep 1, 2018	*Citrobacter koseri*	Bloodstream	6
8	Intra-articular injection, lumbar spine	Aug 29, 2018	Pain clinic	Pain	Sep 4, 2018	*Escherichia coli, Enterococcus faecalis*	Bloodstream	35
9	Intra-articular injection, knee	Aug 30, 2018	Orthopedic clinic	Osteoarthritis	Sep 7, 2018	*Escherichia coli, Enterococcus faecalis*	Knee	5
10	Intra-articular injection, cervical spine	Sep 12, 2018	Pain clinic	Pain	Sep 15, 2018	*Enterobacter cloacae, Citrobacter freundii*	Bloodstream, cellulitis at injection site§	9
11	Intra-articular injection, cervical and lumbar spine	Sep 12, 2018	Pain clinic	Pain (history of rheumatoid arthritis)	Sep 16, 2018	*Enterobacter cloacae, Citrobacter freundii*	Bloodstream	12
12	Intra-articular injection, lumbar spine and index fingers; intravenous infusion	Sep 12, 2018	Pain clinic	Pain, rheumatoid arthritis, osteoarthritis	Sep 16, 2018	*Enterobacter cloacae*	Bloodstream, lumbar epidural abscess	12

* As reported to CDC by health departments.
† Abscess and vertebrae were not cultured; both organisms were isolated from blood, and *E. faecalis* only was isolated from disc space.
§ No organisms were isolated from skin; both organisms were isolated from blood.

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All authors have completed and submitted the ICMJE form for disclosure of potential conflicts of interest. No potential conflicts of interest were disclosed.

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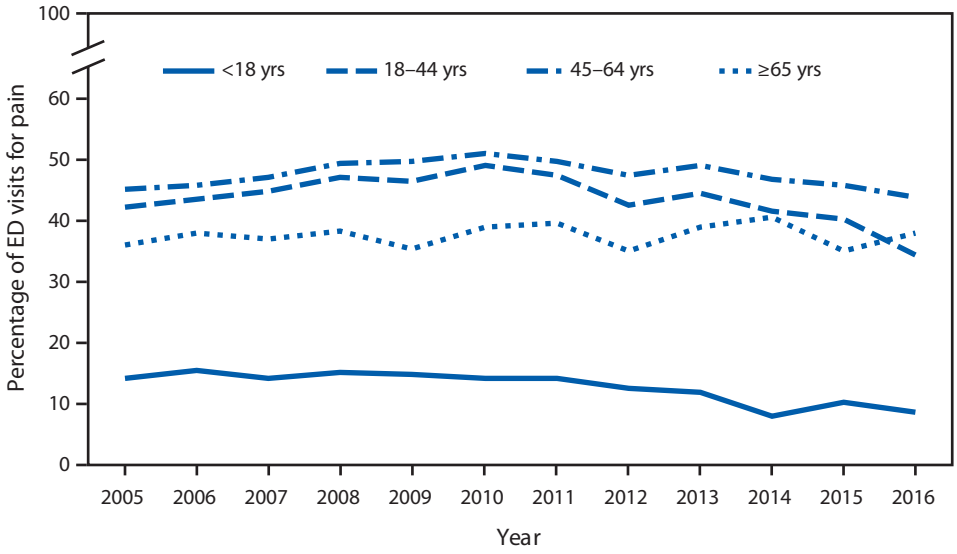
QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Emergency Department (ED) Visits for Pain* at Which Opioids† Were Given or Prescribed, by Patient Age and Year — National Hospital Ambulatory Medical Care Survey, 2005–2016



* Based on a sample of visits to EDs in noninstitutional general and short-stay hospitals, exclusive of federal, military, and Veterans Administration hospitals, located in the 50 states and the District of Columbia. Pain-related visits were defined using up to three reasons for visit coded according to the National Center for Health Statistics Reason for Visit Classification (https://www.cdc.gov/nchs/data/series/sr_02/sr02_078.pdf) and grouped using an algorithm (https://jamanetwork.com/journals/jama/fullarticle/1149438).

† Visits in which at least one opioid was given in the ED or prescribed at discharge were analyzed. Opioids were defined using the Cerner Multum (https://www.cerner.com/solutions/drug-database) third level therapeutic category codes for narcotic analgesics (60) and narcotic analgesic combinations (191). Visits with only buprenorphine or buprenorphine-naloxone given or prescribed were not included.

The percentage of ED visits for pain with an opioid given or prescribed for those aged <18 years was stable from 2005 to 2011 but decreased from 2011 to 2016 from 14.3% to 8.5%. Among those aged 18–44 years and 45–64 years, the percentage increased from 2005 to 2010 but then decreased from 2010 to 2016. There was no significant change in opioid prescribing for visits for pain by adults aged ≥65 years, with 38.1% of visits including an opioid in 2016. The percentage of ED visits for pain with an opioid was lower for visits by children compared with adults, with adults aged 45–64 years having the highest percentage (43.8%) in 2016.

Source: National Center for Health Statistics. National Hospital Ambulatory Medical Care Survey, 2005–2016. https://www.cdc.gov/nchs/ahcd/ahcd_questionnaires.htm.

Reported by: Susan M. Schappert, MA, sschappert@cdc.gov, 301-458-4480; Pinyao Rui, MPH; Jill J. Ashman, PhD; Carol J. DeFrances, PhD.

For more information on this topic, CDC recommends the following link: https://www.cdc.gov/drugoverdose/providers/index.html.

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format. To receive an electronic copy each week, visit *MMWR* at *https://www.cdc.gov/mmwr/index.html*.

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Chikungunya virus disease -- United States, 2018
Provisional data reported to ArboNET
Tuesday, January 8, 2019

Chikungunya virus disease is a nationally notifiable condition. Cases are reported to CDC by state and local health departments using standard case definitions. This update from the CDC Arboviral Disease Branch includes provisional data reported to ArboNET for **January 1 – December 31, 2018.**

As of January 8, a total of 90 chikungunya virus disease cases with illness onset in 2018 have been reported to ArboNET from 23 U.S. states (Figure & Table 1). All reported cases occurred in travelers returning from affected areas (Table 2). No locally transmitted cases have been reported from U.S. states.

To date, two locally transmitted chikungunya virus disease case with illness onset in 2018 have been reported to ArboNET from Puerto Rico (Table 1).

Figure. States reporting chikungunya virus disease cases – United States, 2018 (as of January 8, 2019)

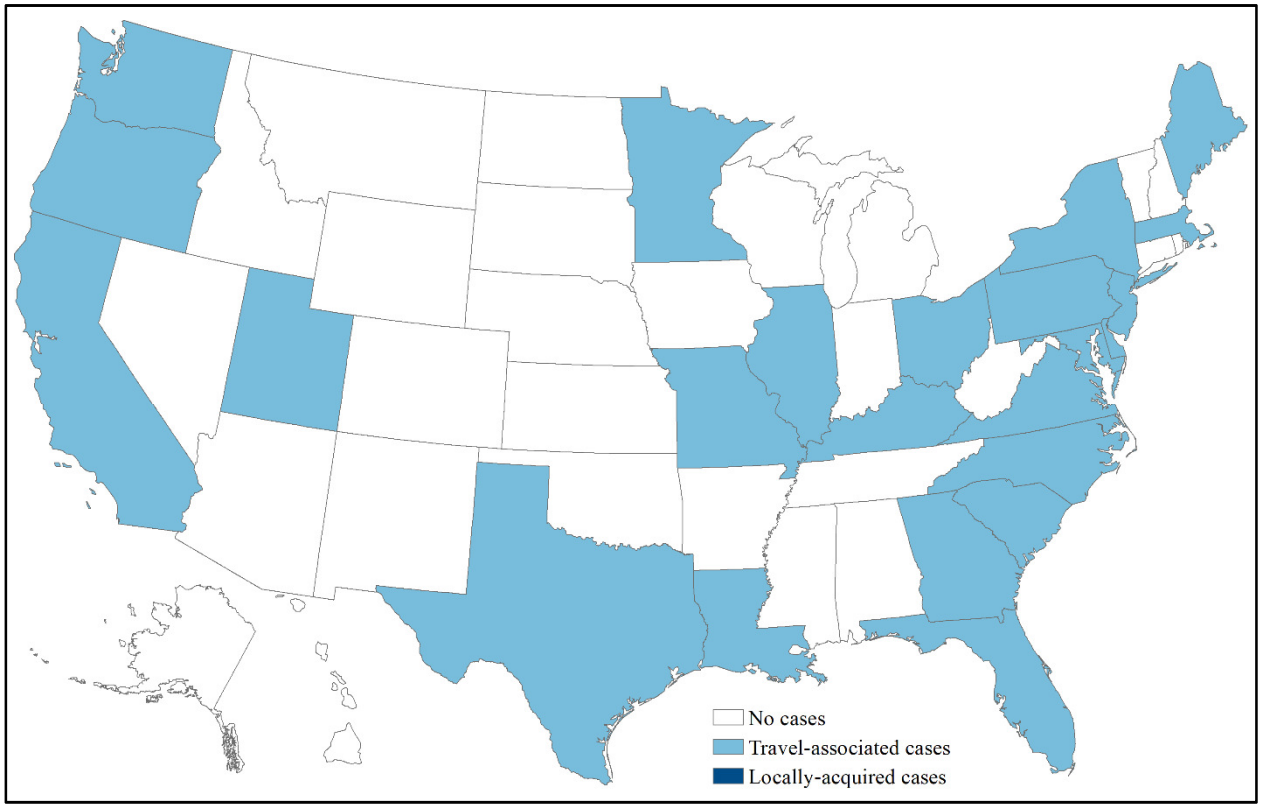


Table 1. Chikungunya virus disease cases* reported to ArboNET by state or territory — United States, 2018 (as of January 8, 2019)

States	Travel-associated cases No. (%) (N=90)	Locally transmitted cases No. (%) (N=0)
California	21 (23)	0 (0)
Delaware	1 (1)	0 (0)
Florida	4 (4)	0 (0)
Georgia	1 (1)	0 (0)
Illinois	9 (10)	0 (0)
Kentucky	1 (1)	0 (0)
Louisiana	1 (1)	0 (0)
Maine	1 (1)	0 (0)
Maryland	2 (2)	0 (0)
Massachusetts	2 (2)	0 (0)
Minnesota	1 (1)	0 (0)
Missouri	2 (2)	0 (0)
New Jersey	14 (16)	0 (0)
New York	10 (11)	0 (0)
North Carolina	2 (2)	0 (0)
Ohio	3 (3)	0 (0)
Oregon	1 (1)	0 (0)
Pennsylvania	1 (1)	0 (0)
South Carolina	1 (1)	0 (0)
Texas	7 (8)	0 (0)
Utah	1 (1)	0 (0)
Virginia	3 (3)	0 (0)
Washington	1 (1)	0 (0)
Territories	**(N=0)**	**(N=2)**
Puerto Rico	0 (0)	2 (100)

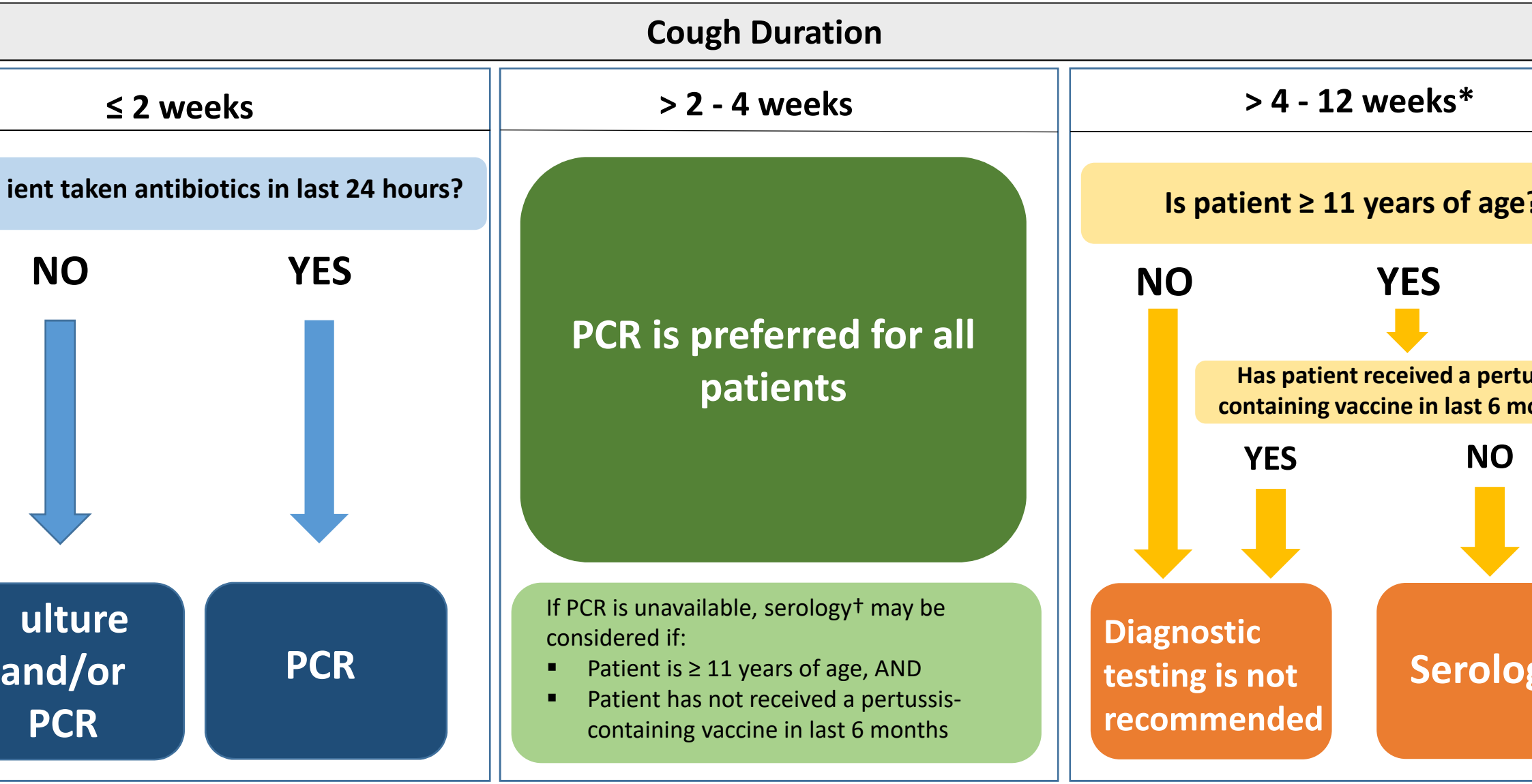
*Includes confirmed and probable cases

Table 2. Chikungunya virus disease cases* reported to ArboNET by travel region– United States, 2018 (as of January 8, 2019)

Travel Region	Travel-associated cases No. (%) (N=90)
Asia	48 (53)
Caribbean	11 (12)
North America	10 (11)
Africa	6 (7)
South America	6 (7)
Central America	3 (3)
Oceania/Pacific	2 (2)
Europe	1 (1)
Unknown	3 (3)

*Includes confirmed and probable cases

Graphic 1: Pertussis Diagnostic Testing Algorithm



ial available serologic assays in the United States are non-standardized and may not provide sufficient sensitivity or specificity to accurately diagnose pertussis; the ideal serology test to dia an-pertussis toxin IgG

available pertussis diagnostics cannot accurately detect *B. pertussis* infection beyond 12 weeks of cough.

Pertussis Diagnostic Testing Algorithm

Cough Duration

≤ 2 weeks

CULTURE

propriate for all ages
not use if patient is taking antibiotics
t impacted by recent receipt of
rtussis vaccines

PCR

propriate for all ages
t impacted by antibiotic use
t impacted by recent receipt of
rtussis-containing vaccines

> 2 - 4 weeks

PCR (preferred)

- Appropriate for all ages
- Not impacted by antibiotic use
- Not impacted by recent receipt of pertussis vaccines

If PCR is unavailable, serology† may be considered if:

- Patient is ≥ 11 years of age, AND
- Patient has not received a pertussis-containing vaccine in last 6 months

> 4 - 12 weeks*

SEROLOGY†

- Appropriate for ages ≥ 11 years
- Not impacted by antibiotic use
- Do not use if patient received a pertussis vaccine in last 6 months

Diagnostic testing is not recommend if:

- Patient is < 11 years of age
- Patient received a pertussis vaccin last six months

allavailable serologic assays in the United States are non-standardized and may not provide sufficient sensitivity or specificity to accurately diagnose pertussis; the ideal serology test to dia
an-pertussis toxin IgG
vailable pertussis diagnostics cannot accurately detec*B. pertussis* infection beyond 12 weeks of cough.

Pertussis Diagnostic Testing Algorithm

Cough Duration

≤ 2 weeks

CULTURE

: all ages
acted by antibiotics? Yes*
acted by vaccines? No

PCR

: all ages
acted by antibiotics? No
acted by vaccines? No

SEROLOGY

Not recommended

> 2 - 4 weeks

CULTURE

Not recommended

PCR (Preferred)

- Age: all ages
- Impacted by antibiotics? No
- Impacted by vaccines? No

SEROLOGY††

(May be used if PCR is unavailable)

- Age: ≥ 11 years
- Impacted by antibiotics? No
- Impacted by vaccines? Yes†

> 4 - 12 weeks**

CULTURE

Not recommended

PCR

Not recommended

SEROLOGY††

- Age: ≥ 11 years
- Impacted by antibiotics? No
- Impacted by vaccines? Yes††

ould not be used for patients who have received antibiotics within the past 24 hou
should not be used for patients who have received a pertussis-containing vaccine in the past 6 months; commercially available serologic assays in the United States are non-standardized and may no
nsitivity or specificity to accurately diagnospertussis; the ideal serology test to diagnose pertussis is anti-pertussis toxin IgG
available pertussis diagnostics cannot accurately detec*B. pertussis* infection beyond 12 weeks of cough.

Provisional data

Dengue activity – United States, 2018
Provisional data reported to ArboNET
Wednesday December 26, 2018

In 2010, dengue became a nationally reportable condition following approval by the Council of State and Territorial Epidemiologists, and case definitions were revised in 2015. ArboNET is a national electronic surveillance system for arboviral diseases in the U.S. administered by CDC. ArboNET was developed in response to the West Nile virus (WNV) epidemic in 1999 and non-WNV arboviral diseases were added to the system beginning in 2003.

Dengue cases have been reported to ArboNET since 2003. To better capture epidemiologic data on travel-associated cases, a dengue module was added in 2012. ArboNET data on reported dengue cases began to be disseminated to state health departments via weekly reports starting in August 2015.

In the United States, dengue presents in three epidemiologic settings:

- Endemic transmission – occurs in tropical areas where *Aedes* species mosquitoes are always present and dengue virus (DENV) transmission occurs throughout the year (e.g., Puerto Rico, Virgin Islands).
- Travel-associated cases – occurs in persons infected with a DENV while traveling to a dengue-endemic area of the world. Such cases are most often observed in regions of the U.S. where dengue is not endemic.
- Sporadic outbreaks – occurs in parts of the US where *Aedes sp.* mosquitoes exist, and are usually initiated from a returning traveler that is infected with the virus (e.g., Florida, US-Mexico border states).

The objectives of dengue reporting in ArboNET is to monitor disease epidemiology, provide timely information to public health official, and to monitor prevention efforts.

This update from the CDC Dengue Branch includes provisional data reported to ArboNET for **January 1 – December 26, 2018** for nationally notifiable dengue disease from 50 states and five territories. (Additional resources for dengue disease information and data are included on page 8). In some areas, **2010-2017** summarized data is also provided for the purposes of comparison.

Dengue activity in 2018

As of December 26, 2018, forty-two states and three territories have reported dengue cases to ArboNET for 2018. **[Figure 1]**.

Figure 1. Laboratory-positive travel-associated and locally-acquired dengue cases from the 50 states and five territories — United States, 2018 as of December 26, 2018.

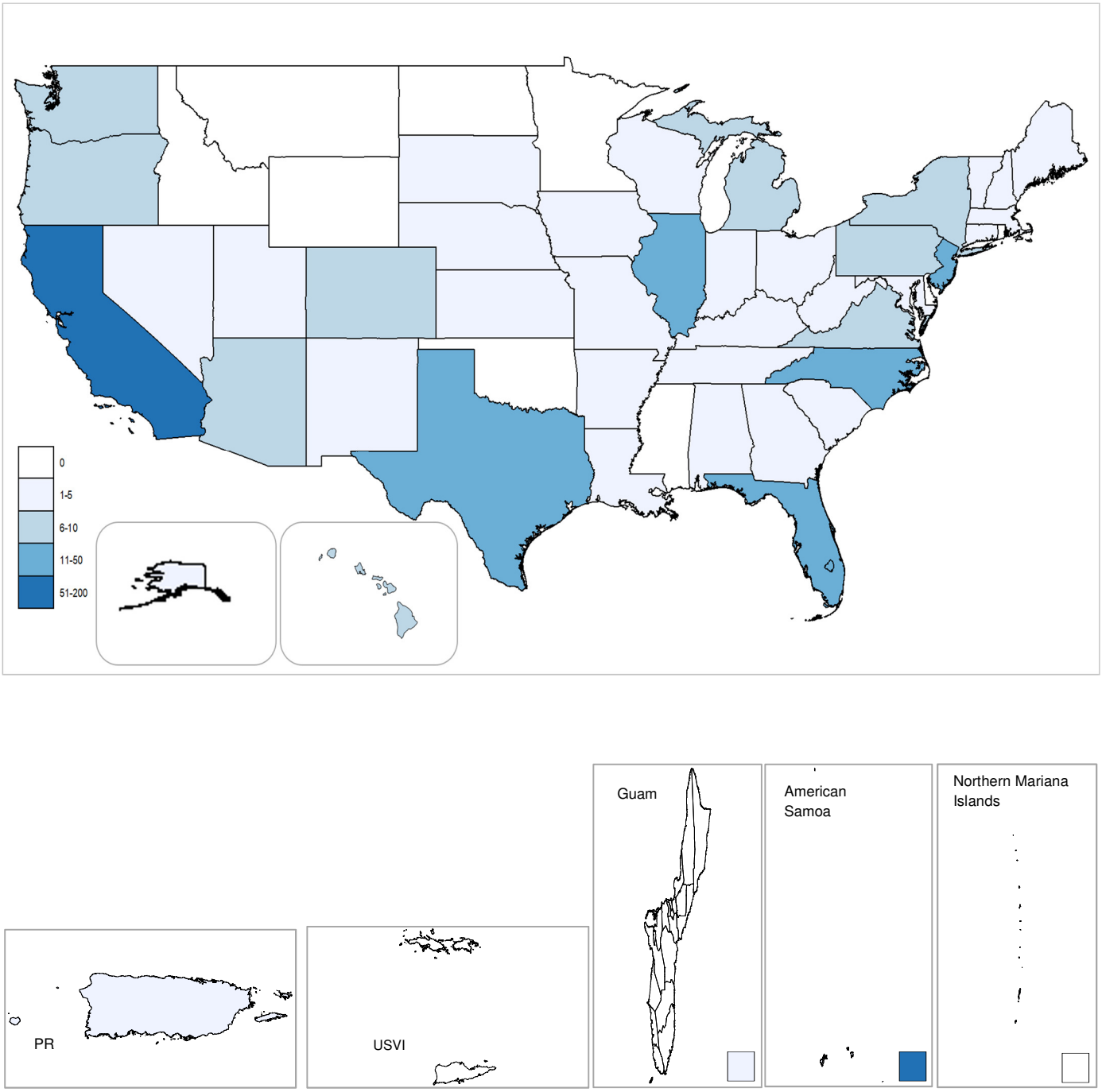


Table 1. Cumulative laboratory-positive[ǂ] dengue cases reported to ArboNET by state and status of travel history — United States, 2018 (as of December 26, 2018) compared to 2010-2017 summarized data.

State	2018		2010-2017			
	Travel-associated cases	Locally-acquired cases[ǂǂ]	Travel-associated cases		Locally-acquired cases[ǂǂ]	
	No.	No.	Median	Range (Min. – Max.)	Median	Range (Min. – Max.)
Total	316	154	3	0-197	0.5	0-10911
Alabama	2	0	4	0-5	0	0-0
Alaska	2	0	1	0-5	0	0-0
American Samoa	0	150	0	0-1	0	0-199
Arizona	8	0	10	1-98	0	0-0
Arkansas	2	0	1	0-4	0	0-0
California	72	0	116.5	5-197	0	0-0
Colorado	9	0	3	0-21	0	0-0
Connecticut	2	0	4.5	0-18	0	0-0
Delaware	0	0	1	0-2	0	0-0
District of Columbia	2	0	1	0-11	0	0-0
Florida	49	1	79	16-137	5.5	0-58
Georgia	5	0	8.5	4-20	0	0-0
Guam	3	0	0	0-1	0	0-0
Hawaii	10	0	10	0-19	0	0-200
Idaho	0	0	1	0-4	0	0-0
Illinois	12	0	22	7-35	0	0-0
Indiana	1	0	5.5	0-14	0	0-0
Iowa	5	0	4	2-11	0	0-0
Kansas	2	0	3	1-8	0	0-0
Kentucky	2	0	1	0-4	0	0-0
Louisiana	2	0	4.5	1-6	0	0-0
Maine	1	0	1	0-6	0	0-0
Maryland	5	0	8.5	0-13	0	0-0
Massachusetts	2	0	2	0-17	0	0-0
Michigan	6	0	9	5-16	0	0-0
Minnesota	0	0	11.5	0-29	0	0-0
Mississippi	0	0	1	0-2	0	0-0
Missouri	1	0	4	0-13	0	0-0
Montana	0	0	2	0-5	0	0-0
Nebraska	1	0	0.5	0-7	0	0-0
Nevada	1	0	2.5	0-6	0	0-0

New Hampshire	1	0	0.5	0-5	0	0-0
New Jersey	20	0	21.5	0-84	0	0-0
New Mexico	1	0	0.5	0-5	0	0-0
New York	8	0	111.5	32-183	0	0-1
North Carolina	10	1[¥]	8	0-13	0	0-0
North Dakota	0	0	1	0-2	0	0-0
Northern Mariana Islands	0	0	0	0-0	0	0-0
Ohio	5	0	7.5	2-16	0	0-0
Oklahoma	0	0	2	0-5	0	0-0
Oregon	10	0	0	0-9	0	0-0
Pennsylvania	9	0	21	4-24	0	0-0
Puerto Rico	1	1	0	0-0	1034	9-10911
Rhode Island	0	0	2	0-9	0	0-0
South Carolina	3	0	3	0-13	0	0-0
South Dakota	1	0	1.5	0-3	0	0-0
Tennessee	4	0	4.5	1-13	0	0-0
Texas	14	1	33	7-71	0	0-24
U.S. Virgin Islands	0	0	0	0-1	7	0-174
Utah	2	0	0.5	0-6	0	0-0
Vermont	1	0	3	0-4	0	0-0
Virginia	8	0	16.5	8-28	0	0-0
Washington	6	0	17	9-24	0	0-0
West Virginia	1	0	0.5	0-2	0	0-0
Wisconsin	4	0	8	5-17	0	0-0
Wyoming	0	0	0	0-1	0	0-0

[ǂ] Includes confirmed and probable dengue cases, the case definitions for which can be found online at: http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/case-definition/2015/

[ǂǂ] No history of travel to a dengue-endemic region in the 14 days before illness onset

[¥] Laboratory acquired case

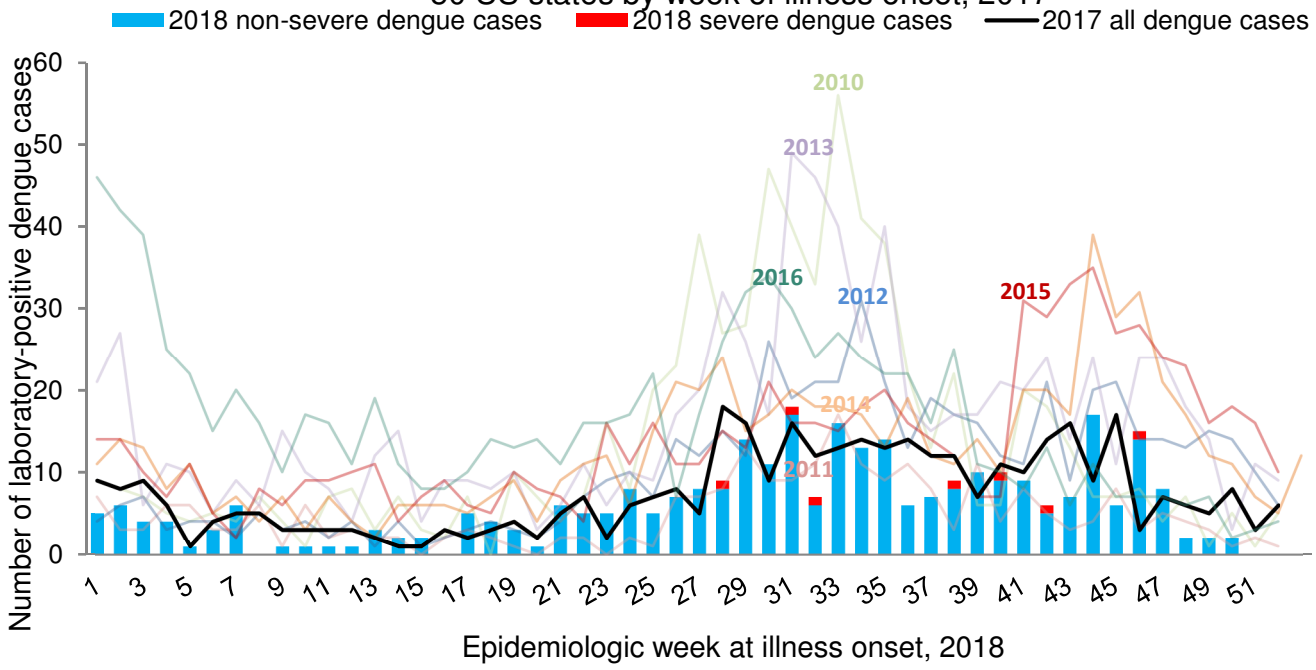
Table 2. Cumulative laboratory-positive travel-associated and locally-acquired dengue cases reported to ArboNET by state and disease severity — United States, 2018 (as of December 26, 2018).

State	2018			
	Dengue cases*		Severe dengue cases*	
	No.	%	No.	%
Total	463	100	7	100
Alabama	1	0	1	14
Alaska	2	0	0	0
American Samoa	150	32	0	0
Arizona	7	2	1	14
Arkansas	2	0	0	0
California	72	16	0	0
Colorado	9	2	0	0
Connecticut	2	0	0	0
Delaware	0	0	0	0
District of Columbia	2	0	0	0
Florida	47	10	3	43
Georgia	5	1	0	0
Guam	3	1	0	0
Hawaii	10	2	0	0
Idaho	0	0	0	0
Illinois	12	3	0	0
Indiana	1	0	0	0
Iowa	5	1	0	0
Kansas	2	0	0	0
Kentucky	2	0	0	0
Louisiana	2	0	0	0
Maine	1	0	0	0
Maryland	5	1	0	0
Massachusetts	2	0	0	0
Michigan	6	1	0	0
Minnesota	0	0	0	0
Mississippi	0	0	0	0
Missouri	1	0	0	0
Montana	0	0	0	0
Nebraska	1	0	0	0
Nevada	1	0	0	0
New Hampshire	1	0	0	0
New Jersey	20	4	0	0
New Mexico	1	0	0	0

New York	8	2	0	0
North Carolina	11	2	0	0
North Dakota	0	0	0	0
Northern Mariana Islands	0	0	0	0
Ohio	5	1	0	0
Oklahoma	0	0	0	0
Oregon	9	2	1	14
Pennsylvania	9	2	0	0
Puerto Rico	2	0	0	0
Rhode Island	0	0	0	0
South Carolina	3	1	0	0
South Dakota	1	0	0	0
Tennessee	4	1	0	0
Texas	15	3	0	0
U.S. Virgin Islands	0	0	0	0
Utah	2	0	0	0
Vermont	1	0	0	0
Virginia	8	2	0	0
Washington	6	1	0	0
West Virginia	1	0	0	0
Wisconsin	3	1	1	14
Wyoming	0	0	0	0

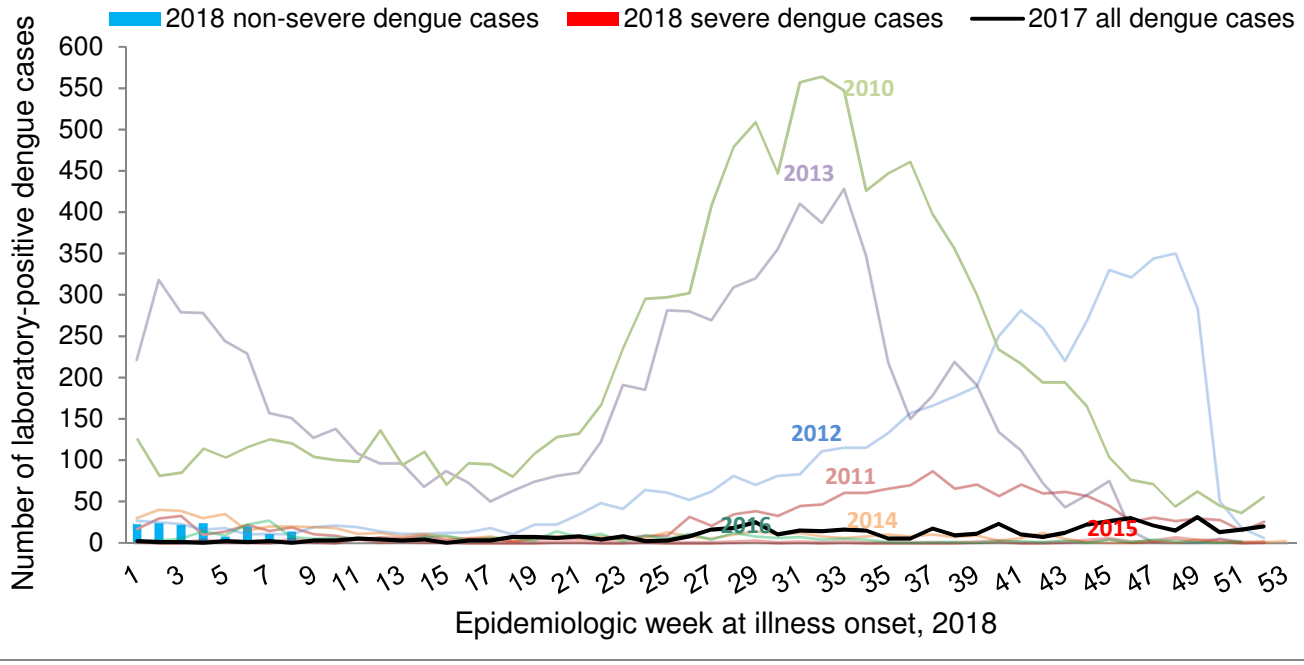
*Case definitions for dengue and severe dengue can be found online at:
http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/case-definition/2015/

Figure 2. Number of laboratory-positive travel-associated dengue cases from 50 US states by week of illness onset, 2017



* Bars refer to 2018 non-severe and severe travel-associated dengue cases from 50 US states by week of illness onset. In addition, current data (2018) is compared to previous years (i.e. 2010-2017) overall dengue cases which are depicted by lines.

Figure 3. Number of laboratory-positive travel-associated dengue cases from five US territories by week of illness onset, 2018



Additional resources

For additional dengue disease information and data, please visit the following websites:

- CDC's Dengue Branch:
  http://www.cdc.gov/dengue/

- National Notifiable Diseases Surveillance System
  http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/

- U.S. Virgin Islands Department of Health
  https://www.facebook.com/virginislandsDOH/

- Puerto Rico Department of Health
  http://www.salud.gov.pr/Estadisticas-Registros-y-Publicaciones/Informes%20Arbovirales/Reporte%20ArboV%20semana%2041-2018.pdf

EPIDEMIOLOGY UPDATE - 1/16/2019

Case Count

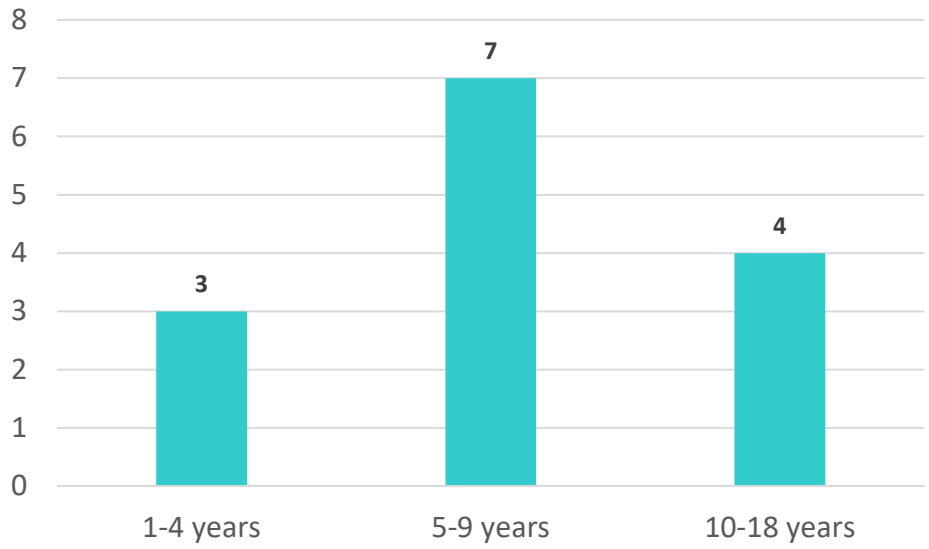
- Confirmed: 14
- Suspect: 2

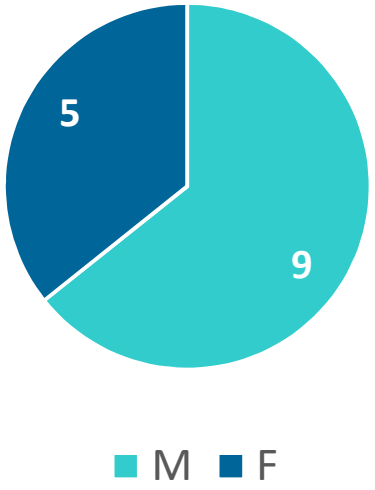
Hospitalizations

- Hospitalization: 1

Updated 1/16/2019, 8am

Age & Gender* (n=14)

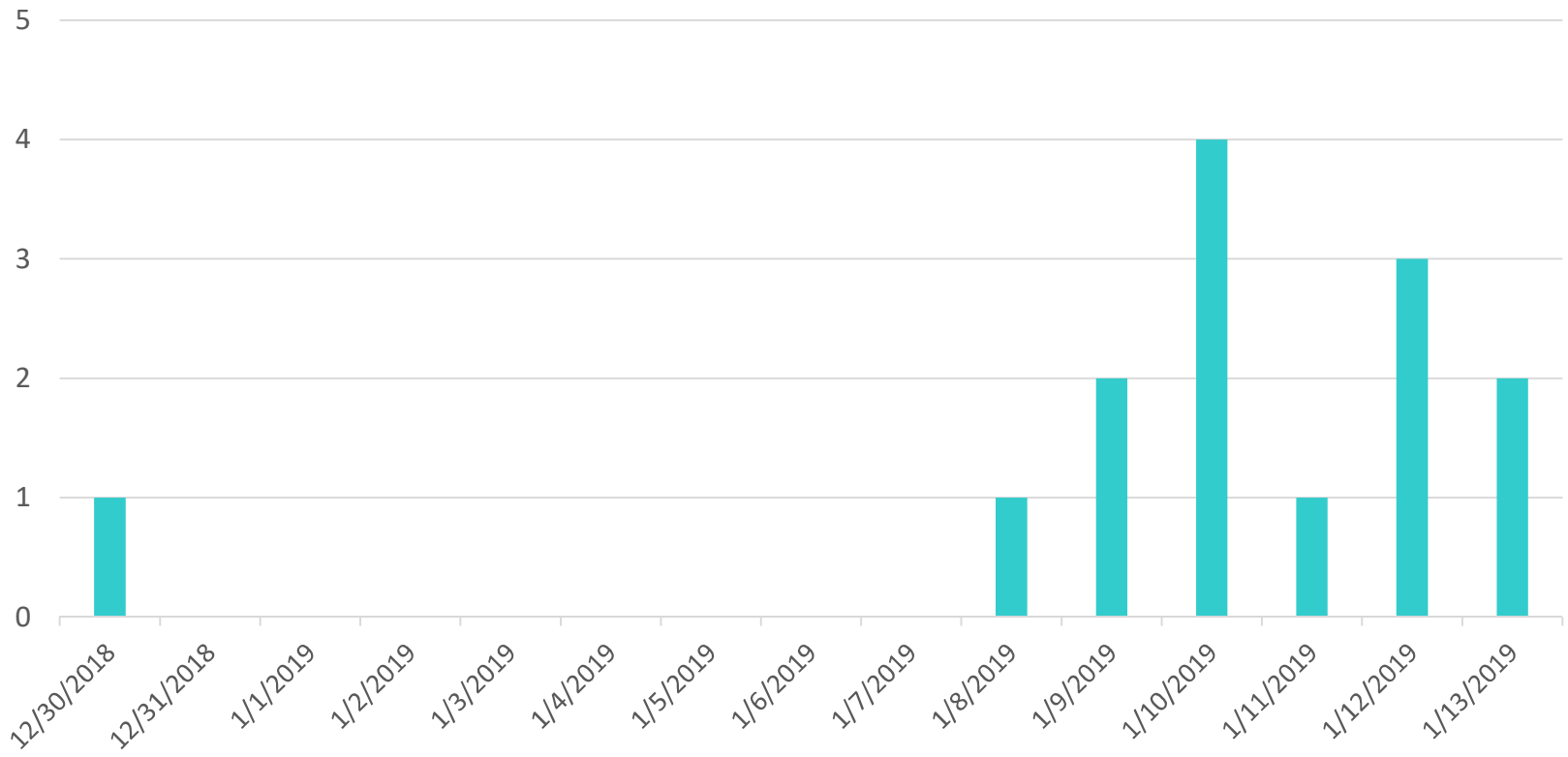




*Confirmed cases only

Updated 1/16/2019, 8am

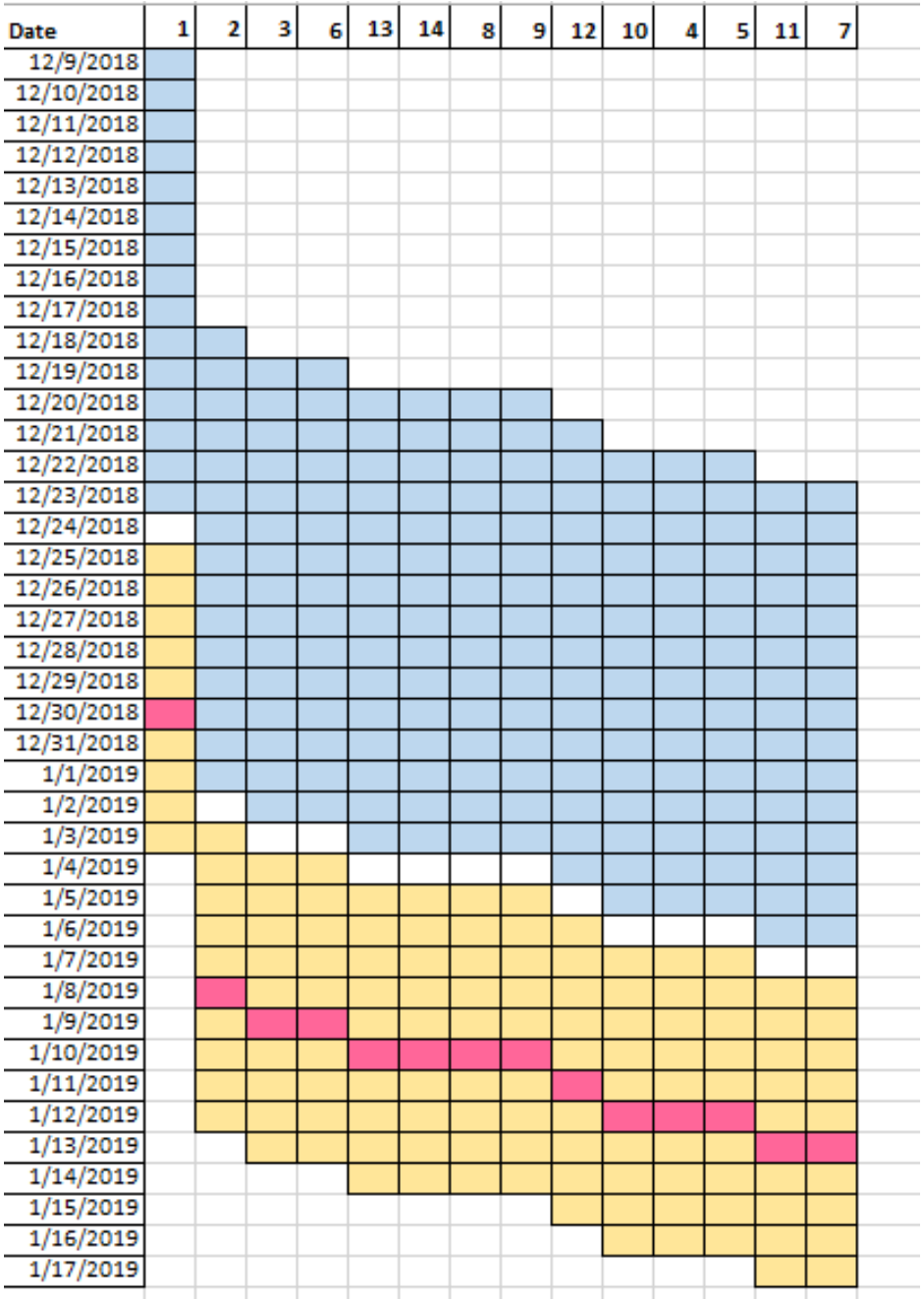
Epi Curve* (n=14)



*Confirmed cases only

Updated 1/16/2019, 8am

Exposure, Rash Onset & Contagious Period*



*Confirmed cases only

Updated 1/16/2019, 8am

Immunization Status* (n=14)

- Unknown: 1
- Unimmunized: 13

*Confirmed cases only

Updated 1/16/2019, 8am

Provisional data

Dengue activity – United States, 2018
Provisional data reported to ArboNET
Wednesday December 19, 2018

In 2010, dengue became a nationally reportable condition following approval by the Council of State and Territorial Epidemiologists, and case definitions were revised in 2015. ArboNET is a national electronic surveillance system for arboviral diseases in the U.S. administered by CDC. ArboNET was developed in response to the West Nile virus (WNV) epidemic in 1999 and non-WNV arboviral diseases were added to the system beginning in 2003.

Dengue cases have been reported to ArboNET since 2003. To better capture epidemiologic data on travel-associated cases, a dengue module was added in 2012. ArboNET data on reported dengue cases began to be disseminated to state health departments via weekly reports starting in August 2015.

In the United States, dengue presents in three epidemiologic settings:

- Endemic transmission – occurs in tropical areas where *Aedes* species mosquitoes are always present and dengue virus (DENV) transmission occurs throughout the year (e.g., Puerto Rico, Virgin Islands).
- Travel-associated cases – occurs in persons infected with a DENV while traveling to a dengue-endemic area of the world. Such cases are most often observed in regions of the U.S. where dengue is not endemic.
- Sporadic outbreaks – occurs in parts of the US where *Aedes sp.* mosquitoes exist, and are usually initiated from a returning traveler that is infected with the virus (e.g., Florida, US-Mexico border states).

The objectives of dengue reporting in ArboNET is to monitor disease epidemiology, provide timely information to public health official, and to monitor prevention efforts.

This update from the CDC Dengue Branch includes provisional data reported to ArboNET for **January 1 – December 19, 2018** for nationally notifiable dengue disease from 50 states and five territories. (Additional resources for dengue disease information and data are included on page 8). In some areas, **2010-2017** summarized data is also provided for the purposes of comparison.

Dengue activity in 2018

As of December 19, 2018, forty-one states and three territories have reported dengue cases to ArboNET for 2018. **[Figure 1]**.

Figure 1. Laboratory-positive travel-associated and locally-acquired dengue cases from the 50 states and five territories — United States, 2018 as of December 19, 2018.

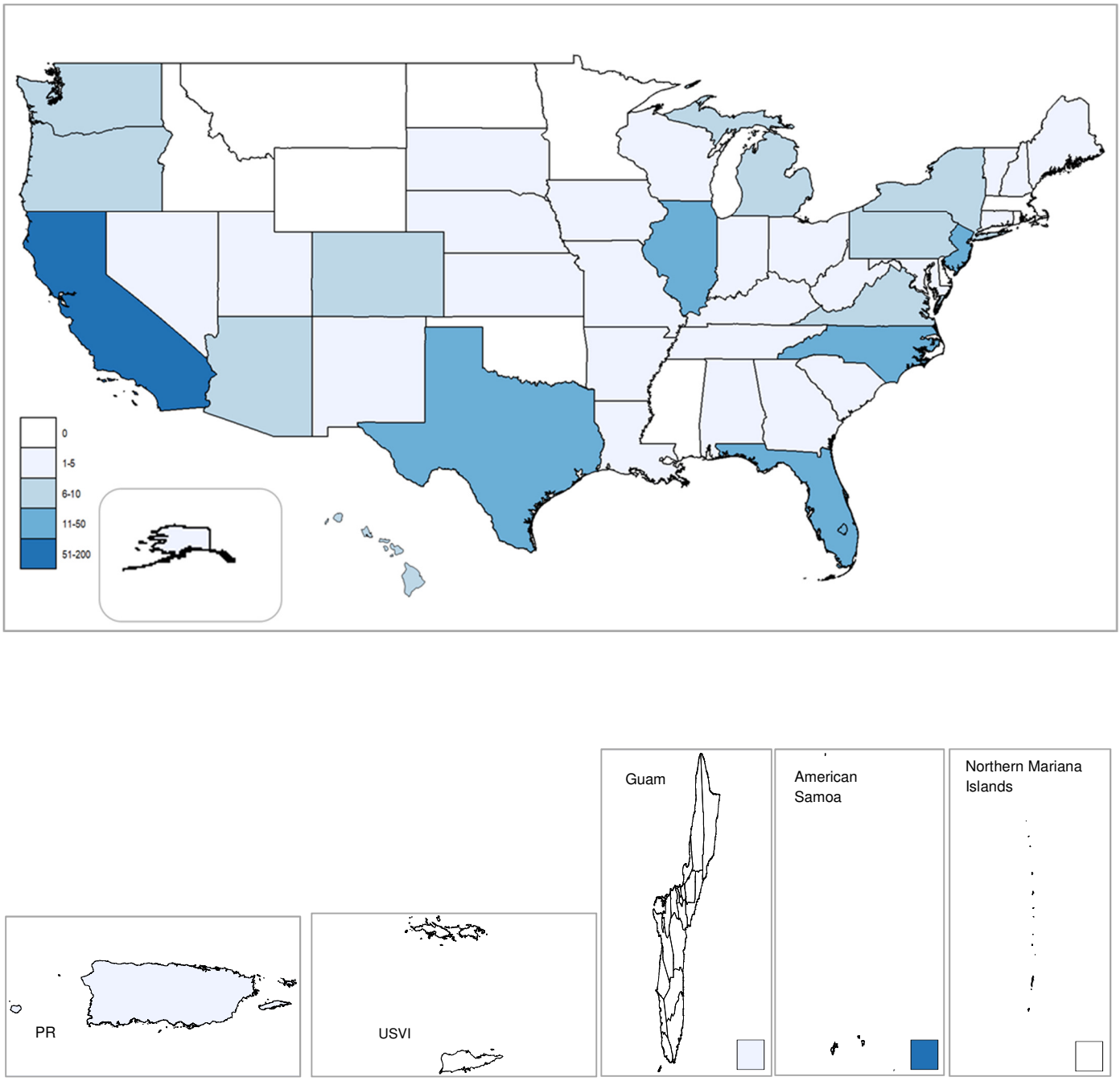


Table 1. Cumulative laboratory-positive[ǂ] dengue cases reported to ArboNET by state and status of travel history — United States, 2018 (as of December 19, 2018) compared to 2010-2017 summarized data.

State	2018		2010-2017			
	Travel-associated cases	Locally-acquired cases[ǂǂ]	Travel-associated cases		Locally-acquired cases[ǂǂ]	
	No.	No.	Median	Range (Min. – Max.)	Median	Range (Min. – Max.)
Total	313	154	3	0-197	0.5	0-10911
Alabama	2	0	4	0-5	0	0-0
Alaska	2	0	1	0-5	0	0-0
American Samoa	0	150	0	0-1	0	0-199
Arizona	8	0	10	1-98	0	0-0
Arkansas	2	0	1	0-4	0	0-0
California	72	0	116.5	5-197	0	0-0
Colorado	9	0	3	0-21	0	0-0
Connecticut	2	0	4.5	0-18	0	0-0
Delaware	0	0	1	0-2	0	0-0
District of Columbia	2	0	1	0-11	0	0-0
Florida	49	1	79	16-137	5.5	0-58
Georgia	5	0	8.5	4-20	0	0-0
Guam	3	0	0	0-1	0	0-0
Hawaii	10	0	10	0-19	0	0-200
Idaho	0	0	1	0-4	0	0-0
Illinois	12	0	22	7-35	0	0-0
Indiana	1	0	5.5	0-14	0	0-0
Iowa	4	0	4	2-11	0	0-0
Kansas	2	0	3	1-8	0	0-0
Kentucky	2	0	1	0-4	0	0-0
Louisiana	2	0	4.5	1-6	0	0-0
Maine	1	0	1	0-6	0	0-0
Maryland	5	0	8.5	0-13	0	0-0
Massachusetts	0	0	2	0-17	0	0-0
Michigan	6	0	9	5-16	0	0-0
Minnesota	0	0	11.5	0-29	0	0-0
Mississippi	0	0	1	0-2	0	0-0
Missouri	1	0	4	0-13	0	0-0
Montana	0	0	2	0-5	0	0-0
Nebraska	1	0	0.5	0-7	0	0-0
Nevada	1	0	2.5	0-6	0	0-0

New Hampshire	1	0	0.5	0-5	0	0-0
New Jersey	20	0	21.5	0-84	0	0-0
New Mexico	1	0	0.5	0-5	0	0-0
New York	8	0	111.5	32-183	0	0-1
North Carolina	10	1[¥]	8	0-13	0	0-0
North Dakota	0	0	1	0-2	0	0-0
Northern Mariana Islands	0	0	0	0-0	0	0-0
Ohio	5	0	7.5	2-16	0	0-0
Oklahoma	0	0	2	0-5	0	0-0
Oregon	10	0	0	0-9	0	0-0
Pennsylvania	9	0	21	4-24	0	0-0
Puerto Rico	1	1	0	0-0	1034	9-10911
Rhode Island	0	0	2	0-9	0	0-0
South Carolina	3	0	3	0-13	0	0-0
South Dakota	1	0	1.5	0-3	0	0-0
Tennessee	4	0	4.5	1-13	0	0-0
Texas	14	1	33	7-71	0	0-24
U.S. Virgin Islands	0	0	0	0-1	7	0-174
Utah	2	0	0.5	0-6	0	0-0
Vermont	1	0	3	0-4	0	0-0
Virginia	8	0	16.5	8-28	0	0-0
Washington	6	0	17	9-24	0	0-0
West Virginia	1	0	0.5	0-2	0	0-0
Wisconsin	4	0	8	5-17	0	0-0
Wyoming	0	0	0	0-1	0	0-0

[ǂ] Includes confirmed and probable dengue cases, the case definitions for which can be found online at: http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/case-definition/2015/

[ǂǂ] No history of travel to a dengue-endemic region in the 14 days before illness onset

[¥] Laboratory acquired case

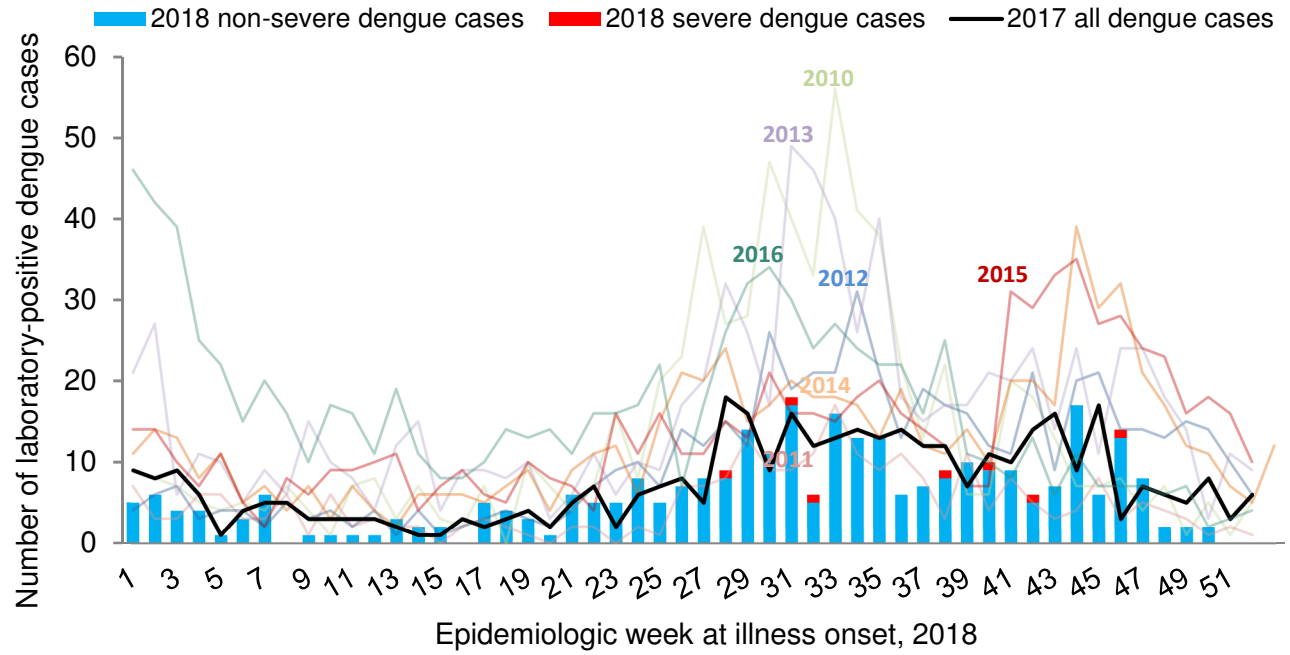
Table 2. Cumulative laboratory-positive travel-associated and locally-acquired dengue cases reported to ArboNET by state and disease severity — United States, 2018 (as of December 19, 2018).

State	2018			
	Dengue cases*		Severe dengue cases*	
	No.	%	No.	%
Total	460	100	7	100
Alabama	1	0	1	14
Alaska	2	0	0	0
American Samoa	150	33	0	0
Arizona	7	2	1	14
Arkansas	2	0	0	0
California	72	16	0	0
Colorado	9	2	0	0
Connecticut	2	0	0	0
Delaware	0	0	0	0
District of Columbia	2	0	0	0
Florida	47	10	3	43
Georgia	5	1	0	0
Guam	3	1	0	0
Hawaii	10	2	0	0
Idaho	0	0	0	0
Illinois	12	3	0	0
Indiana	1	0	0	0
Iowa	4	1	0	0
Kansas	2	0	0	0
Kentucky	2	0	0	0
Louisiana	2	0	0	0
Maine	1	0	0	0
Maryland	5	1	0	0
Massachusetts	0	0	0	0
Michigan	6	1	0	0
Minnesota	0	0	0	0
Mississippi	0	0	0	0
Missouri	1	0	0	0
Montana	0	0	0	0
Nebraska	1	0	0	0
Nevada	1	0	0	0
New Hampshire	1	0	0	0
New Jersey	20	4	0	0
New Mexico	1	0	0	0

New York	8	2	0	0
North Carolina	11	2	0	0
North Dakota	0	0	0	0
Northern Mariana Islands	0	0	0	0
Ohio	5	1	0	0
Oklahoma	0	0	0	0
Oregon	9	2	1	14
Pennsylvania	9	2	0	0
Puerto Rico	2	0	0	0
Rhode Island	0	0	0	0
South Carolina	3	1	0	0
South Dakota	1	0	0	0
Tennessee	4	1	0	0
Texas	15	3	0	0
U.S. Virgin Islands	0	0	0	0
Utah	2	0	0	0
Vermont	1	0	0	0
Virginia	8	2	0	0
Washington	6	1	0	0
West Virginia	1	0	0	0
Wisconsin	3	1	1	14
Wyoming	0	0	0	0

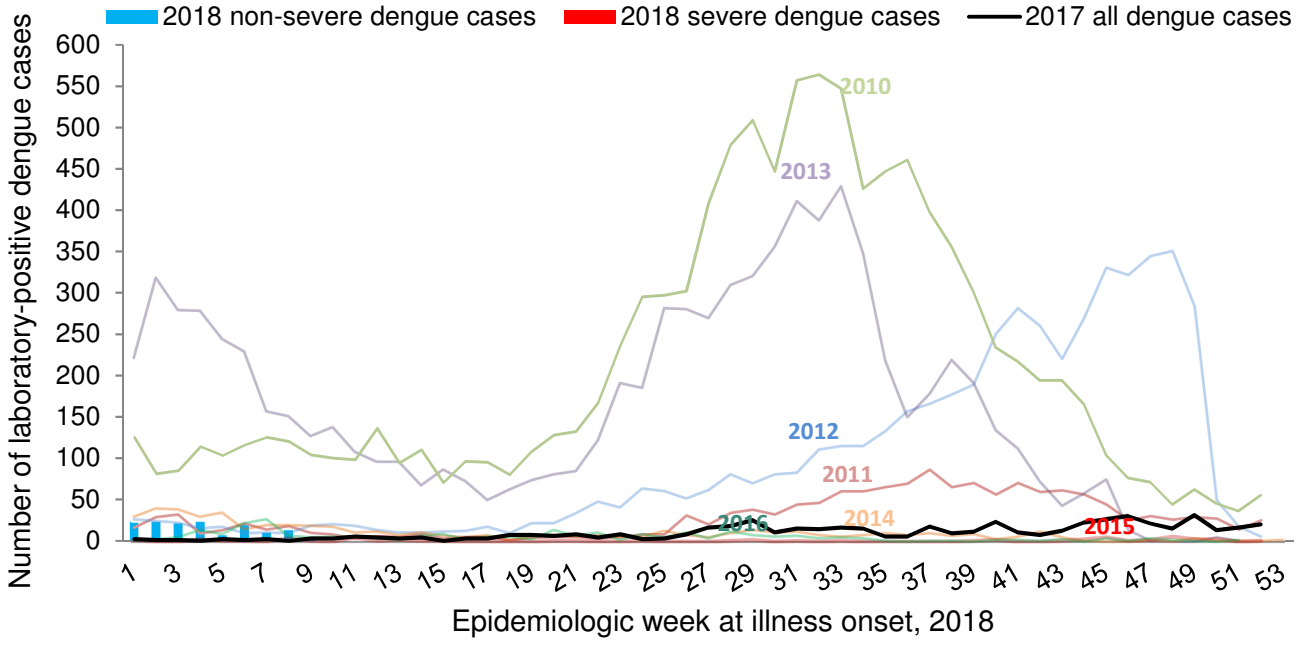
*Case definitions for dengue and severe dengue can be found online at:
http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/case-definition/2015/

Figure 2. Number of laboratory-positive travel-associated dengue cases from 50 US states by week of illness onset, 2018



* Bars refer to 2018 non-severe and severe travel-associated dengue cases from 50 US states by week of illness onset. In addition, current data (2018) is compared to previous years (i.e. 2010-2017) overall dengue cases which are depicted by lines.

Figure 3. Number of laboratory-positive travel-associated dengue cases from five US territories by week of illness onset, 2018



Additional resources

For additional dengue disease information and data, please visit the following websites:

- CDC's Dengue Branch:
  http://www.cdc.gov/dengue/

- National Notifiable Diseases Surveillance System
  http://wwwn.cdc.gov/nndss/conditions/dengue-virus-infections/

- U.S. Virgin Islands Department of Health
  https://www.facebook.com/virginislandsDOH/

- Puerto Rico Department of Health
  http://www.salud.gov.pr/Estadisticas-Registros-y-Publicaciones/Informes%20Arbovirales/Reporte%20ArboV%20semana%2041-2018.pdf

Best Practices for Health Care Professionals on Pertussis Diagnosis

With the ongoing resurgence of pertussis, health care professionals will continue to see more patients with suspected pertussis. The following compilation of best practices is intended to help health care professionals choose the appropriate test to accurately diagnose pertussis in a symptomatic patient.

Who to Test

Initial symptoms of pertussis are often indistinguishable from other minor respiratory tract infections, making it difficult to recognize pertussis in the earliest stages. With illness progression, more typical pertussis symptoms may develop, including paroxysmal cough, inspiratory whoop, and post-tussive vomiting *(https:// www.cdc.gov/pertussis/clinical/features.html)*. Only patients with signs and symptoms consistent with pertussis disease should be tested to confirm the diagnosis. Testing asymptomatic persons (including contacts of a pertussis case who are not experiencing symptoms) should be avoided as laboratory results could be inaccurate.

Available Testing Methods

Diagnosis of pertussis is challenging, with no single test adequate to confirm the diagnosis throughout the course of illness (Graphic 1). Available tests include culture, polymerase chain reaction (PCR), and serology.

Specimen collection

For culture and PCR testing, nasopharygneal (NP) swabs or aspirates are acceptable; throat or anterior nasal swabs are not. NP swab tips should be polyester (such as Dacron®), rayon, or nylon-flocked. Cotton-tipped or calcium alginate swabs are not acceptable as residues present in these materials inhibit PCR assays. If feasible, NP aspirates are preferred over swabs because aspirates may contain a larger quantity of bacteria in the sample. For serology testing, a serum specimen is required.

Culture

Culture is the gold standard for pertussis diagnosis due to its high specificity. It is also useful for confirming pertussis diagnosis when an outbreak is suspected. In addition, obtaining isolates from culture allows for strain identification and antimicrobial resistance testing, features of which are important to both health care and public health professionals. Culture is best done from NP specimens collected during the first 2 weeks of cough when live bacteria are still present in the nasopharynx (Graphic 1). After 2 weeks, sensitivity is decreased and the risk of a falsely-negative result increases.

Understanding and interpreting testing results

A positive culture for *Bordetella pertussis* confirms the diagnosis of pertussis. However, sensitivity of culture may be poor, especially if specimen collection occurs after the first 2 weeks of cough, the patient is vaccinated, or antibiotic therapy for pertussis has already been administered. Therefore, a negative culture (or no growth of *B. pertussis*) may be falsely-negative for these reasons.

Polymerase Chain Reaction (PCR)

PCR is a molecular technique used to detect *B. pertussis* bacterial DNA and unlike culture, does not require live bacteria present in the specimen and is not impacted by recent pertussis vaccination. It is a rapid test and has excellent sensitivity when used during the appropriate timeframe. NP specimens for PCR should be taken during the first four weeks of cough (Graphic 1). After the fourth week, the amount of bacterial DNA present in the nasopharynx rapidly diminishes, which increases the risk of a falsely-negative result.

Understanding and interpreting testing results

Available pertussis PCR assays have not been standardized, although clinical laboratories typically incorporate a target specific for *B. pertussis* (IS*481*) and may also include targets for other *Bordetella* species. Use of multiple targets improves specificity for *B. pertussis* and are generally preferred over single target assay, when available. Health care professionals are encouraged to inquire about which PCR assay is used by the clinical laboratories where testing is performed for their patients.

Because clinical laboratories might use different DNA targets and cutoff levels for determining positivity, PCR specificity and sensitivity vary depending on the assay used. In addition, PCR testing following antibiotic therapy effective against pertussis can result in a falsely-negative result; it is not recommended to perform PCR testing after 5 days of antibiotic use.

Because some pertussis vaccines contain *B. pertussis* DNA that can be detected by PCR, accidental transfer of the DNA from environmental surfaces to a clinical specimen can result in specimen contamination and a falsely-positive result, especially when specimen collection and vaccination occur in the same area. Using best practices in specimen handling can reduce the risk of contamination of clinical specimens with vaccine pertussis DNA (*https://www.cdc.gov/pertussis/clinical/diagnostic-testing/diagnosis-pcr-bestpractices.html).*

Serology

Serology detects antibodies to *B. pertussis* bacterial cells or proteins; it can be a useful test for diagnosing pertussis when culture and PCR are no longer accurate. A reference-calibrated, anti-pertussis toxin IgG ELISA (enzyme-linked immunosorbent assay) is the most specific and sensitive serologic assay for diagnosing pertussis infection; pertussis IgA and IgM ELISAs lack adequate sensitivity and specificity when diagnosing pertussis, and therefore should not be used as a primary diagnostic tool. Serum specimens can be collected between 2 to 12 weeks following cough onset. Because recent vaccination with a pertussis-containing vaccine leads to a rise in pertussis antibodies and might confound laboratory results, serology should be used only among persons 11 years of age and older whose last pertussis vaccination was at least 6 months prior to testing.

Understanding and interpreting testing results

There are challenges to using serology as a diagnostic test for pertussis in the United States. Reference-calibrated anti-pertussis toxin IgG ELISAs are not commercially available in the United States, and the IgG ELISAs that are available have demonstrated poor specificity. The majority of serology testing for pertussis is performed by commercial laboratories using assays that are non-standardized, however a few commercial laboratories have independently developed their own calibrated, anti-pertussis toxin IgG serologic assays. Health care professionals are encouraged to inquire about which pertussis serologic assay is used by the clinical laboratories where testing is performed for their patients.

CDC and FDA have developed a reference-calibrated, anti-pertussis toxin IgG serologic assay for pertussis diagnosis, which has been a particularly useful tool during suspected outbreaks. This assay is available at CDC and the Minnesota Department of Health specifically to support public health laboratories (https://www.aphl.org/programs/infectious_disease/Pages/VPD.aspx).

Summary

No one test is adequate to confirm pertussis throughout the illness; accurate diagnosis of pertussis depends on choosing the appropriate test, taking into consideration cough duration at the time of specimen collection. While the available tests can be highly accurate, each has caveats with regard to interpretation of results.

Insert graphic here

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GOVERNOR'S OFFICE AGENCY ALERT

Date: 01/15/2019
Department: Health
Submitted by: John Wiesman

ALERT TOPIC: Department of Health has activated our Incident Management Team (IMT) to support the response to an outbreak of measles among several children in Clark County. This outbreak is expanding quickly within and beyond Washington's borders.

PREVIOUS ALERTS ON THIS TOPIC: No

ACTIONS IMMEDIATE:

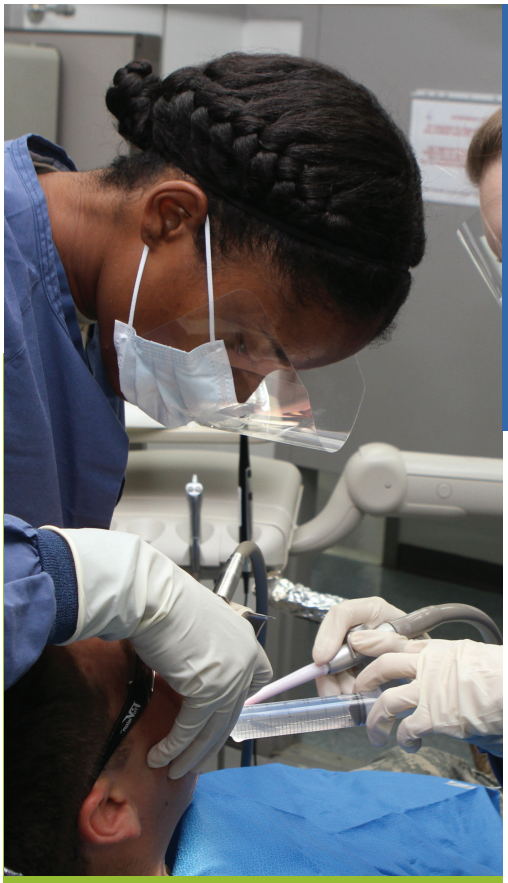
- We've activated our Incident Management Team to support this measles response.
- We're coordinating with Clark County, Oregon Health Authority, and public health agencies across the state.
- We're supporting Clark County Public Health Department with disease investigation, surveillance, risk communication, information management, and vaccination support as needed.
- We've notified all public health agencies in the state and many plan to alert their health care providers to be on heightened alert for possible cases.

MEDIA ATTENTION: We expect significant media attention should the outbreak expand.

MESSAGES/TALKING POINTS:

- The Department of Health is supporting Clark County's response to cases of measles.
- Measles is extremely contagious, and can be serious, especially for young children.
- The most effective way to prevent measles is by being fully immunized.

BACKGROUND/CONTEXT: As of this afternoon, at least thirteen cases of measles among children in/or linked to Clark County have been confirmed by our disease investigators and Public Health Laboratories. Tests from at least two additional suspected cases are being processed now. The majority of the cases are known to be unvaccinated. Two of the three confirmed cases are now residents of Georgia, and there are potential linkages to additional states including Oregon. As of now, Clark County is leading the disease investigation. We are currently working with state and local partners to identify and conduct contact investigations at known contact locations. There are a number of known exposure sites in Washington and Oregon including Portland International Airport, multiple healthcare facilities, and other busy public locations. We are still finding out about additional exposure sites. If we learn that people in Washington beyond Clark County may have been exposed, we'll work with those county public health agencies to make sure they're aware and can take action to protect their communities. We are currently in the early stages of investigation and response, but expect disease activity to increase in the coming days and weeks.



Infection Control Assessment and Response (ICAR)

ICAR uses a consultative and collaborative approach to assess the strength of infection prevention in healthcare, so that public health can create tools to improve existing capability.

Public Health + Healthcare = ICAR

Spokane Regional Health District, Clark County Public Health and the Washington State Department of Health are partnering on an exciting new initiative aimed at assessing infection prevention in dental clinics in Washington.

Consults for Dental Centers

Public health experts will meet with interested dental clinics and conduct a comprehensive infection prevention assessment using evidence-based tools from the Centers for Disease Control and Prevention (CDC). Visits are consultative and provided at no cost. Any dental clinic in Washington can participate in this voluntary program.

Going Back to Basics

The tool will be sent to the participating facility ahead of time. Topics covered during the visit will range from hand hygiene to antimicrobial stewardship. Visits will last approximately 1/2 day and may involve observations of staff performing hand hygiene or sterilization practices.

Relationship Building

Public health will make these visits simple and valuable. Assessing overall infection prevention throughout Washington will no doubt result in a stronger healthcare system.

To schedule your ICAR assessment, contact:

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Knowledge, Attitudes, and Practices of Washington State Civil Surgeons Conducting Immigration Medical Exams

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Background:
Washington State (WA) is home to approximately one million persons born outside the United States (US). US Citizenship and Immigration Services (USCIS) designates physicians as civil surgeons to medically examine people seeking to adjust their immigration status to lawful permanent resident. The Centers for Disease Control and Prevention provides Technical Instructions outlining the exam components; the tuberculosis (TB) Technical Instructions were updated in October 2018. To assess civil surgeon training needs in WA, the WA Department of Health (DOH) conducted a survey of civil surgeons from May to September 2018.

Methods:
USCIS identified 108 physicians designated as civil surgeons and practicing in WA. DOH contacted each physician or practice, and 84 confirmed that the physician was a currently practicing civil surgeon in WA. A survey asking about civil surgeon characteristics, knowledge, attitudes, preferences, and practices, as well as status adjustment applicant characteristics, was mailed to these civil surgeons.

Results:
Seventy of 84 (83%) civil surgeons completed the questionnaire. Twenty-one of 68 (31%) respondents correctly identified status adjustment applicants who should receive chest radiographs, and 40/68 (59%) correctly identified all indications for which a status adjustment applicant should be referred to the health department for further active TB disease evaluation. Twenty-one of 68 (31%) respondents described potential barriers to implementing the October 2018 requirement to use only interferon gamma release assays for TB screening of applicants; cost was the most frequently cited barrier. Fifteen of 68 (22%) respondents reported providing treatment to status adjustment applicants whom they diagnose with latent TB infection, while 18/68 (26%) reported sometimes providing treatment and sometimes referring these applicants to another provider, 32/68 (47%) not providing treatment but referring to another provider, and 3/68 (4%) neither providing treatment nor referring to another provider. Fifty of 66 (76%) respondents reported they would like training on the TB Technical Instructions.

Conclusions:
The survey revealed gaps in civil surgeons' knowledge about the Technical Instructions; survey results were used to inform development of a statewide civil surgeon training that occurred in November 2018. Enhancing the effectiveness of status adjustment medical examinations through civil surgeon training provides an opportunity for communicable disease identification and prevention in persons born outside the US.

MEASLES

MEASLES IS A SERIOUS DISEASE

Measles is a serious disease that causes a rash and fever.

Measles is very contagious. It spreads when a person with measles breathes out, coughs or sneezes.

Anyone who is not vaccinated is much more likely to get measles.

Measles can be dangerous, especially for babies and young children. In rare cases, it can be deadly.

PROTECT YOUR FAMILY FROM MEASLES

The best way to protect your family from measles is to get vaccinated. Doctors recommend that all children get the MMR shot.

The MMR shot is safe and effective at preventing measles. It also protects against mumps and rubella.

Getting the MMR vaccine is safer than getting measles.

Most children do not have any side effects from the shot. The side effects that do occur are usually mild and don't last long, such as a fever, mild rash, and soreness.

MMR VACCINE DOES NOT CAUSE AUTISM

No studies have found a link between autism and the MMR vaccine. This has been carefully studied by many doctors and scientists from around the world.

Scientists are studying what makes a child more likely to have autism. Most scientists agree that family genes may make a person more likely to develop autism. They are also studying connections between autism and where a person lives.

Ask your doctor if you have questions about measles or MMR vaccine.

For more information:
www.doh.wa.gov/measles
http://kingcounty.gov/health/measles

Somali Health Board
Peace, Unity, Life, Health

Public Health
Seattle & King County

Washington State Department of Health

WHAT TO DO IF YOU THINK YOU HAVE MEASLES

Symptoms of measles and how it spreads

Measles often begins with a high fever, cough, runny nose, and red, watery eyes. After 3-5 days, a rash usually begins on the face and spreads to other parts of the body.

You can spread measles to others once you have symptoms. You are contagious until the rash goes away.

You can get measles just by being in a room where a person with measles has been. The measles virus stays in the air for up to two hours after that person has left the room.

Call your doctor or clinic right away if you see symptoms

Your doctor or clinic will let you know if you need to come in for a visit.

Measles is very contagious and you could give it to someone in a waiting room. It's important to tell your doctor or clinic that you have symptoms of measles **before** you go. They will give you instructions for what to do so that you don't spread measles.

Stay at home if you have measles

It's important not to spread measles to others.

Stay at home if you have measles. Don't go to school, work, to the store, or other people's homes.

Don't have visitors to your home if you or your child have a fever or rash.

For more information:
www.doh.wa.gov/measles
http://kingcounty.gov/health/measles

Public Health
Seattle & King County

Somali Health Board
Peace, Unity, Life, Health

DOH 348-651 , August 2017

Washington State Department of Health

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